REVISED

State Water Resources Control Board
Meeting to Approve
Resolution No. R1-2016-0017 adopting
Action Plan for the Upper Elk River Sediment TMDL
Staff Responses to Public Comments

A. Introduction

The North Coast Regional Water Quality Control Board (North Coast Board) adopted Resolution No. R1-2016-0017 on May 12, 2016, amending the Water Quality Control Plan for the North Coast Region (Basin Plan) to include the Action Plan for the Upper Elk River Sediment Total Maximum Daily Load (TMDL Action Plan). The TMDL Action Plan is the regulatory culmination of an 18-year TMDL project of the North Coast Board, which began in 1998 when the watershed was listed as impaired by excessive sediment discharge and sedimentation. Staff and collaborators have conducted substantial scientific research since that time in an environment of considerable controversy and challenge. Out of abundance of caution and in an effort to satisfy concerns about the scientific basis of the TMDL, the North Coast Board has undertaken multiple rounds of independent review. It convened an Independent Science Review Panel, with guidance offered in its final report (2002)[1], which the North Coast Board then followed. A draft sediment TMDL was submitted for scientific peer review, with favorable comments as reported in 2013[2]. Finally, the North Coast Board contracted through U.S. EPA with Tetra Tech, Inc. as an independent party to synthesize staff work and other relevant scientific documents to produce the technical report in 2015[3] upon which the TMDL Action Plan is based.

The beneficial uses that have been impaired since 1998 include the cold water habitat-related uses typically at issue in sediment-impaired streams in the North Coast Region (e.g., COLD, SPWN, and RARE). Cold water habitat impairment by sediment is also associated with the listing of several salmonid species on the state and/or federal threatened and endangered species lists, including, Coho, Chinook, steelhead, and coastal cutthroat trout. Somewhat unique to the Elk River Watershed, as compared to other sediment impaired north coast streams, however, is the impairment of domestic and agricultural water supplies (MUN and AGR). Elevated turbidity and dramatic alteration of the hydrology via aggradation have impaired the ability of landowners in the lower watershed from drawing surface water without damaging equipment or introducing taste, odor, and health risk via bacterial growth, as was historically possible. Recreational beneficial uses are also identified as impaired.

[1] http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/elk_river/pdf/report/item12_ISRP_Report.pdf
[2] http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/elk_river/pdf/130719_staff_report/response_to_comments/20130719_Response_to_Peer_Review_Comments.pdf
[3] http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/elk_river/pdf/151222/03_20151021_Upper_Elk_River_Tech_Analysis_for_Sediment.pdf

Fully unique to the Elk River Watershed is the imposition of nuisance conditions as defined in the Porter-Cologne Water Quality Control Act, which have also resulted from excessive sediment discharge and sedimentation. Large-scale sediment deposition in the 1988-1997 period, followed by continued elevated sediment discharge, has caused ongoing aggradation in a reach of the watershed described as the impacted reach. The result of such aggradation is the regular overbank flooding across fields and roads and at times into homes, which now occurs even during small storms that would normally (e.g., prior to the 1988-1997 period) have been contained within the streambanks. With a total length of approximately 9.3 miles, the impacted reaches extend from the confluence of Brown's Gulch on the North Fork Elk and Tom Gulch on the South Fork Elk to the mainstem Elk River at Berta Road. The impaired domestic and agricultural water supplies are predominantly within and downstream of the impacted reaches. Nuisance flooding affects many individual farms, ranches, residences, and residential neighborhoods, as well as public and private roads. The increased incidence of flooding is: 1) injurious to human health and obstructs the free use of property, so as to interfere with the comfortable enjoyment of life and property; 2) affects at the same time an entire community or neighborhood; and 3) occurs as a result of sediment waste discharge.

Of critical importance to ones' understanding of the Elk River Watershed and its current state of impairment, is a review of the highly erosive underlying geology and the unique importance of vegetative canopy and groundcover to minimizing erosion and promoting ecosystem function. The predominant geology of the Elk River Watershed is the Wildcat Group (71% of the watershed), which is highly erodible and the primary source of the fine, silty sediment that aggrades the channel in the impacted reach. The Yager terrane makes up about 17% of the watershed and is a sandstone-dominated rock. The Franciscan Complex is common in the north coast and the subject of many of the north coast sediment TMDLs; but it only accounts for about 6% of the Elk River Watershed. The Hookton and other similar unconsolidated Quaternary marine and river deposits only make up about 4% of the Elk River Watershed; though, they are extremely erodible when subject to direct precipitation.

The Little South Fork Elk is a tributary to the South Fork Elk and is predominantly owned by the State of California, while managed by the U.S. Bureau of Land Management as the Headwaters Forest Preserve. The potential for analysis in the Elk River Watershed is vastly improved, as compared to other north coast watersheds, by the unique presence of such a valuable reference stream. This boon has led to the substantial quantitative (field study) and qualitative analyses of the Little South Fork Elk River, which support the general hypothesis that the natural erosivity of the underlying geology in the Elk River Watershed is strongly mitigated by vegetation. In particular, the Little South Fork Elk is characterized by deep layers of duff, multi-storied shrub and tree layers, and a closed canopy, all which serve to dissipate the erosive energy of rainfall, slow water movement across the landscape, and direct water to groundwater rather than to surface expression. Here, sediment delivery rates are estimated (by sound scientific methods) to be very low.
Conversely, where soils are bare, shrubs removed, and/or the canopy opened, the erosive energy of Humboldt Bay's annual average precipitation (i.e., 39 inches at the coast, 60 inches at the headwaters) and periodic large storm events predictably leads to rates of erosion dramatically higher than those in an unmanaged sub-watershed. The rate of management-related sediment discharge during the 1988 –1997 period when dramatic aggradation was

first initiated is estimated as 1670% of natural (e.g., well-vegetated, minimally disturbed conditions). Because of tightened regulation, improved management, and substantially lower rainfall, those rates are estimated in the 2004 – 2011 period to be 485% of natural.

The North Coast Board has endeavored to use its enforcement and permitting tools to elicit the cleanup and abatement of sedimentation and control of sediment discharges in the Elk River since 1998. While these orders have had positive effect, especially as coupled with approved Habitat Conservation Plans and revised Forest Practice Rules, resolution of beneficial use impairment and abatement of nuisance flooding has been elusive. Specifically, elevated rates of sediment discharge, sedimentation, aggradation, and worsening pollution and nuisance are likely to continue until all controllable factors associated with timberland management activities are fully controlled and the impacted reach remediated. Controllable factors are defined in the Basin Plan as "those actions, conditions, or circumstances resulting from man's activities that may influence the quality of the waters of the State and that may be reasonably controlled."

Under a consent decree, the North Coast Board collaborated with the U.S. Environmental Protection Agency, Region IX (EPA) to develop 20 separate sediment-related TMDLs for watersheds in the North Coast Region during the 14-year period of 1996 – 2010, many based primarily on desktop analyses. The TMDL Action Plan for the Elk River, on the other hand, is the culmination of an intensive 18-year TMDL project of the North Coast Board that has included an unprecedented amount of scientific collaboration, data collection, statistical analysis, and stakeholder engagement. Numerous North Coast Board and State Water Resources Control Board (State Water Board) workshops and hearings have been held over this 18-year period to authorize funding for research, review data and analyses, establish cleanup and abatement requirements, establish waste discharge requirements, and establish a TMDL. Since 2012, the North Coast Board has held five workshops and two hearings on the TMDL itself, each with an opportunity for oral comment. Further, the public has had multiple opportunities to submit written comments on the draft TMDL. Indeed numerous informal comments submitted on the Peer Review Draft Staff Report resulted in a significant revision of the document, with the assistance of EPA's independent contractor, Tetra Tech, Inc.

Tetra Tech synthesized several relevant documents, including the Peer Review Draft Staff Report (2013), scientific peer review comments and staff responses (2013), Salmon Forever Analysis (2013), Elk River Hydrodynamic and Sediment Transport Modeling Pilot Project (2013), Humboldt Redwood Company's Watershed Analysis Revisited (2014), informal public comments on the Peer Review Draft (submitted in 2015), and an Internal Draft Staff Report designed to address formal scientific peer and informal public comments (2015). The result was a final report by Tetra Tech, Inc. entitled *Upper Elk River: Technical Analysis for Sediment* (Technical Report), which is the very well vetted basis for the TMDL Action Plan and represents a level of analysis more than adequate to establish a TMDL.

In summary, the North Coast Board has adopted as an amendment to its Basin Plan a TMDL Action Plan that:

1. Establishes a zero load allocation, which in its implementation is necessarily conceptual. The zero load allocation is designed to control all controllable factors

affecting sediment delivery, while the downstream reaches remain in a state unable to assimilate additional sediment without further causing impact to beneficial uses and contributing to nuisance conditions.

2. Establishes numeric targets that describe hillslope and instream conditions reflective of full control of all controllable factors affecting sediment delivery.
3. Depends on a state-funded Hydrodynamic and Sediment Transport Modeling effort to establish a framework of sediment remediation and channel restoration predicted to restore ecosystem function through to Humboldt Bay (i.e. the Elk River Recovery Assessment).
4. Depends on a federal and state-funded Watershed Stewardship Program to design, fund and implement individual sediment remediation and channel restoration projects.
5. Depends on upslope landowners' (e.g., Humboldt Redwood Company, Green Diamond Resources Company, and the U.S. Bureau of Land Management) compliance with North Coast Board issued permits that to the maximum extent feasible incorporate hillslope targets and instream indicators to control all controllable factors associated with sediment delivery towards a sediment load allocation of zero.

List of Comments

Commenter(s):	**Submitted by:**
Elk River resident	Jesse Noell Stephanie Bennett
Elk River resident	Kristi Wrigley
Elk River resident	Michael Wrigley
Coast Action Group (CAG)	Alan Levine
Environmental Protection Information Center (EPIC)	Rob DiPerna
Pacific Coast Federation of Fishermen's Associations (PCCFA) Institute for Fisheries Resources (IFR)	Vivian Helliwell Time Sloane
Humboldt Redwood Company (HRC)	Michael W. Miles
Green Diamond Resource Company (GDRCo)	Gary C. Rynearson

The majority of comments received by the State Water Board were comparable to those previously raised and addressed by the North Coast Board. The major comments can generally be divided into the following categories: watershed delineation, source analysis, load allocations, numeric targets, program of implementation, legal precedent and concerns, WDR measures, and other. HRC contends that the North Coast Board's responses related to the load allocations, source analysis, and watershed delineation have been inadequate. HRC further recommends that the State Board return the TMDL to the North Coast Board for revision. GDRCo also contends that the North Coast Board's responses have been inadequate, specifically related to the problem statement, load allocation, and numeric targets. Kristi Wrigley asserts that previous responses to the issues of load allocation, monitoring, and logging as allowed under the WDR have been inadequate. Finally, Jesse Noelle and Stephanie Bennett assert that the North Coast Board's responses on the load allocation and Program of Implementation are inadequate.

The North Coast Board maintains that the science and technical investigations completed by staff, dischargers, contractors, and independent parties have established enough information to determine a TMDL for the waterbody and that all associated comments have been previously and adequately addressed. Further, changes were incorporated in the TMDL Action Plan before and during the North Coast Board adoption hearing in response to comments related to the basin plan amendment language, especially regarding the Problem Statement, watershed delineation, numeric targets, and load allocations. The North Coast Board also heard and addressed legal comments. All told, the comments have received sufficient consideration, review, and response. Nevertheless, comments for the State Water Board approval hearing are expanded below in additional detail, especially where commenters have raised perceived inadequacies. Comments have been grouped by general subject matter and concerns. The North Coast Board's responses to the comments that came prior to its action in May 2016 can be found on its website[4].

As summarized in Section H below, many commenters raise issues related to a separate action of the North Coast Board that has been petitioned. Namely, commenters raise concern about how the TMDL has been translated into enforceable provisions contained in HRC's new Waste Discharge Requirements (WDR) adopted in November 2016. The TMDL sets forth the loading capacity and load allocations for non-point sources in the Upper Elk River Watershed. To the extent commenters question the North Coast Board's adoption of specific WDRs that implement the TMDL, staff does not address these comments in detail as they are the subject of a petition that will be handled as a separate matter.

B. Watershed Delineation and Sediment Source Area

The entire Elk River Watershed is listed on the 303(d) list as impaired due to excess sediment and sedimentation. For reasons explained below, the TMDL was developed for the Upper Elk River, while the TMDL Action Plan addresses remediation and restoration actions in the lower watershed as well. The need for a Lower Elk River sediment TMDL will be evaluated approximately 5 years after adoption of this TMDL, with the potential to develop a sediment source analysis and load allocations for the lower watershed.

Comment: GDRCo states that there are inconsistencies in the Problem Statement and Program of Implementation, as they relate to delineation of the Upper Elk River Watershed in the TMDL. In particular, GDRCo suggests that there are additional sources of sediment from other ownerships besides industrial timberlands, and that these sources lay outside the delineated water body. GDRCo also states that the Watershed Stewardship Program addresses the entire watershed, necessarily requiring the TMDL to also address the entire watershed, versus only the Upper Elk River watershed and its landowners. HRC also asserts that the TMDL Action Plan does not give enough consideration to other sources of impairment. HRC argues that the sediment loading from current timber management is a small contribution and not the main cause, but one of a combination of factors, including

[4] http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/elk_river/pdf/160422/160318_RTC_Elk_TMDL_Total_EW.pdf

influences from the Lower Elk River and non-timber management land uses in the Upper Elk (e.g., ranching, residential development).

Response: The North Coast Board previously addressed these comments. During CEQA scoping for the TMDL project the entire Elk River Watershed was initially included. However, it is clear that the North Coast Board's highest priority for the Elk River is to address the nuisance conditions related to water supply and flooding in the impacted reach, which ends where Berta Road crosses Elk River in the lower watershed. To address these high priority issues, the North Coast Board chose to develop a TMDL for the Upper Elk River, which is delineated to end at Berta Road and includes the watershed area above that contributes sources of sediment to the impacted reach of Elk River.

The TMDL Action Plan includes the development of a hydrodynamic and sediment transport model (Elk River Recovery Assessment) to model conditions from the top of the impacted reach to Humboldt Bay. The Elk River Recovery Assessment investigates the influences of infrastructure and tidal mechanics, recognizing that sediment remediation and channel restoration efforts requires an understanding of these and other factors in the whole watershed. The modeling results will be included in a final report, which also describes a framework of remediation and restoration actions predicted to return the system to a trajectory of recovery. Similarly, the TMDL Action Plan includes the Watershed Stewardship Program, which invites all interested stakeholders, including lower landowners, to participate in the development of a stewardship vision. Specifically, the Watershed Stewardship Program is tasked with implementing individual remediation and restoration actions in suitable locations with the goal of abating nuisance flooding and restoring beneficial uses.

The North Coast Board intends to address sediment delivery from sources in the lower watershed via a Lower Elk TMDL or via existing programs (e.g., storm water permits), as necessary. For example, North Coast Board staff concludes that the residential areas associated with City of Eureka and suburban, non-incorporated areas may best be addressed via the storm water program. At the request of the North Coast Board, the State Water Board designated the City of Eureka and suburban, non-incorporated areas including the Elk River as a Phase II municipality triggering development of a storm water program that addresses sediment waste discharge and hydromodification. With the Phase II municipal storm water program in place, the North Coast Board has been able to prioritize and focus on the dominant sediment sources affecting sedimentation and beneficial use impacts by turning attention to the Upper Elk River Watershed.

The Problem Statement includes consideration of potential sources of sediment derived from ranching and residential properties in the Upper Elk River Watershed. But, the quantity and associated impacts of these sources are negligible compared to timber-related sediment sources. Additional estimates of these sources will not change any of the findings of the TMDL and will not change the program of implementation. Reductions in management-induced sediment inputs are a critical part of reversing the trend of worsening nuisance conditions, while remediation and restoration activities in the impacted reach can be identified, designed, permitted and funded for expanding the zero assimilative capacity to a

positive number. Further, the North Coast Board recognizes that factors outside the delineated waterbody such as tidal effects in the lower Elk River influence the transport of sediment through the lower watershed. The North Coast Board has established the Elk River Recovery Assessment, as described above, to assess the remediation and restoration actions necessary to improve sediment transport in the lower watershed. The Elk River Recovery Assessment will assess the array of remediation and restoration activities (including infrastructure modification) that may be necessary to ensure recovery of a functioning system and the Watershed Stewardship Program will work towards implementation of these remediation and restoration actions.

C. Source Analysis

The source analysis includes estimates of sediment delivery from: 1) individual management and naturally occurring sources; 2) individual subbasins; and 3) across multiple periods going back to 1955. The source analysis relies on data collected by multiple parties including timberland owners, environmental groups, independent contractors, North Coast Board staff, and other researchers. In an advancement over other sediment TMDLs for the North Coast Region that relied on aerial photographs, much of the Upper Elk River sediment source analysis is derived from field data collected in several reference subbasins and other special site-specific studies.

Comment: GDRCo indicates that the current sediment discharges are primarily a result of in-channel sediment from past management activity, pointing to the Table 1 of the TMDL Action Plan, which shows a decrease in sediment discharge from the periods 1988 – 1997 to 2004 – 2011. HRC cites a downstream monitoring station that has shown decreased annual sediment loads and disagrees with the statement in the TMDL that 640,000 cubic yards of accumulated sediment have been deposited in the impacted reach in the last three decades.

Response: The North Coast Board previously addressed these comments. The TMDL identifies natural and management-related sediment sources and loading. Management-related sources are those associated with past (i.e. legacy) and current land use management activities (e.g., roads, skid trails, or harvest units). In some cases, legacy sources continue to deliver sediment today. As identified by GDRCo, the source analysis indeed does indicate that the largest uncontrolled management-related source of sediment comes from the ongoing erosion of streamside landslides, streambank failures, and the headwater incision of stream channels (i.e., in-channel sources), which were initiated by management activities at some time in the (recent or distant) past. These sources require particular attention vis-à-vis restoration, riparian management zones, and reduced harvest activity in headwall swales to: 1) repair the sites where possible; and 2) avoid further exacerbating the sites where natural repair is the best option.

The source analysis does indeed show a decrease in total and management-related sediment delivery since its peak in the period 1988 – 1997. While this reduction is certainly promising, the rates of sediment delivery are still well above natural estimates and sedimentation continues to aggrade in the impacted reach. Further, suspended sediment data do not explicitly separate the influences of management activities and rainfall. Evaluation of suspended sediment data indicate that when the influence of rainfall is removed, the suspended sediment concentrations have not been substantially reduced by

improved management, in fact the opposite is the case in some years since 1997[5]. Further, despite a decrease in *total* sediment loading (likely due to a combination of management *and* rainfall influences), sediment delivery in some particular subbasins have not been controlled, as compared to others. For example, Tom Gulch has measured management-related sediment delivery rates that are higher in the 2004 – 2011 period than in the 1988 – 1997 period[6].

Reasonable, best scientific methods were used to estimate stored sediment in the impacted reach using cross-sections and calculating the decreased channel volume capacity over time. These estimates are being further refined through the Elk River Recovery Assessment, which is modeling both current and restored hydrodynamic and sediment transport conditions from the top of the impacted reach to Humboldt Bay. Precision in the estimate is unnecessary to establish the TMDL. It is sufficient to demonstrate that there is a large load of sediment now stored in the impacted reach, which needs remediation to provide assimilative capacity for sediment delivered from upstream. The Program of Implementation components are designed to control all controllable factors associated with management related activities in the upper watershed and to increase assimilative capacity in the impacted reach to meet water quality objectives, restore beneficial uses, and abate nuisance conditions.

Comment: HRC contends that the North Coast Board relied on estimates of natural loading that are dependent on methods which are flawed; unsupported by the literature; and much less than other TMDLs in the North Coast Region. HRC states the margin of safety (MOS) argument—particularly, the drainage or stream density value—is used excessively to "downplay the importance of developing a scientifically justifiable sediment source analysis."

Response: The North Coast Board previously addressed these comments. Sediment loading in the Upper Elk River Watershed was estimated using a variety of analytical approaches: literature values, field surveys in study subbasins, aerial photographs, GIS mapping, land use history, erosion monitoring, and application of erosion models. The strength of the analysis in support of the Upper Elk River TMDL exceeds many of the other 20 sediment TMDLs produced for watersheds in the North Coast Region mainly by virtue of the amount of field verification performed. One of the particular strengths of the Upper Elk TMDL is the availability of reference subbasins, including the Headwaters Forest Preserve in the Little South Fork Elk, used to calculate natural sediment delivery rates.

As provided in the Introduction above, the underlying geology of the Elk River Watershed is uniquely erosive, especially as compared to many of the other north coast sediment-impaired watersheds. Another consequence of the highly erosive geology of the Elk River

[5] Lewis, J. (2013). Salmon Forever's 2013 Annual Report on Suspended Sediment, Peak Flows, and Trends in Elk River and Freshwater Cree, Humboldt County, California. Submitted to Redwood Community Action Agency. SWRCB Agreement No. 07-508-551-1. June 2013.

[6] Tetra Tech, Inc. (2015). *Upper Elk River: Technical Analysis for Sediment*. Prepared for the North Coast Regional Water Quality Control Board. October 21, 2015. Available at <http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/elk_river/pdf/151222/03_20151021_Upper_Elk_River_Tech_Analysis_for_Sediment.pdf>

Watershed is that where water flows are concentrated, they readily form channels and those channels tend to migrate headward, delivering all of the associated sediment downstream. Sediment delivery from headward incision was estimated for each of the subbasins in the upper watershed by comparing measured stream densities and using field verification in managed and unmanaged reference subbasins. The North Coast Board has previously addressed the criticism of its subbasin stream density approach. The analysis was based on the data available at the time it was performed. The methodology the North Coast Board relied upon is scientifically and statistically justifiable, and supported by the peer reviewer comments and Technical Report's synthesis and review. While the natural loading estimates for the Upper Elk River are lower than other TMDLs adopted in the North Coast Region, the Upper Elk River Watershed has benefitted from more data collection and field study as compared to other sediment TMDLs.

The Clean Water Act requires that a TMDL include a margin of safety (MOS) to account for any uncertainty. The Upper Elk TMDL incorporates a conservative, implicit MOS by establishing the load allocation as zero. Estimating the sediment loading capacity of a natural system as zero is inherently conservative since no amount of source control, remediation, and restoration can completely eliminate sediment transport downstream. In addition, the TMDL is derived from the sediment source analysis, which likewise incorporated multiple conservative assumptions when applying measurements of surface erosion, landslide, and stream bank erosion across all the subwatersheds. Even with an implicit MOS, the source analysis is based upon the best available science and provides reasonable and comparable sediment loading estimates both temporally and spatially in the upper watershed.

The alternative methods suggested by HRC to estimate natural sediment delivery are inappropriate for the Elk River Watershed. The use of a reference sub-basin to calculate natural sediment source loads is a well-accepted approach. Relying on literature values or estimates from other watersheds with different, more forgiving underlying geology is not representative of conditions in the Elk River Watershed. Further, the North Coast Board entertained multiple TMDL calculation strategies. The selected strategy, however, does not rely on an estimate of natural background, reducing the regulatory significance of the methodology used to calculate natural loads.

Finally, the North Coast Board completed its data collection and analysis in 2013 when it submitted a draft TMDL for scientific peer review. The TMDL Action Plan establishes an adaptive management framework, including a science and monitoring subcommittee of the Watershed Stewardship Program, specifically intended to review and consider new data and information. The North Coast Board is fully committed to adaptive management, as made clear in the TMDL Action Plan, which includes regular check in periods.

D. Load Allocations

The sediment TMDL for the Upper Elk River establishes zero sediment as the total maximum daily load that the existing channel in the impacted reach can receive without impacting beneficial uses of water, causing an exceedance of water quality objectives, or creating nuisance conditions. Implementation of the zero load TMDL requires: 1) control of

all controllable factors affecting sediment delivery from the upper watershed; and 2) remediation and restoration of hydrodynamics and sediment transport capacity in the impacted reach. The zero loading capacity TMDL translates into a technically and legally supportable zero sediment load allocation.

Comment: HRC claims that a zero load allocation is unjustified because the continuing impairments observed in Upper Elk River are exaggerated. It claims that continuing impairments are not supported by evidence, citing the salmonid habitat surveys conducted on its property and its observations of limited aggradation at downstream monitoring stations.

Response: The North Coast Board previously addressed these comments. The Tetra Tech (2015) report concludes that: "A majority of the sediment load that enters the impacted reach is passed through to the Lower Elk River. The portion (~26%) that is retained is sufficiently large to cause ongoing reduction in channel capacity (e.g., continued aggradation) that induces increased flooding, filling of pools, and other problems." HRC's claim that the aggradation is exaggerated is unsupportable. Indeed, the aggradation-induced flooding is one of the primary motivations for the State Water Board's large financial investment in the Elk River Recovery Assessment project. With respect to salmonid habitat within the timberlands, HRC is to be applauded for improvements to salmonid habitat above the impacted reach. Nonetheless, the impairments of the impacted reach, are indisputable, well-documented and vetted, and require multiple actions to restore, including the control of all controllable factors influencing sediment delivery from the timberlands above the impacted reach, as well as restoration actions in and downstream of the impacted reach. Further, the TMDL Action Plan affords considerable flexibility as to how the zero load allocation is translated into regulatory actions.

There is no dispute that multiple factors influence the retention of sediment in the impacted reach, including downstream constrictions, tidal influence, and others. Indeed, the TMDL Action Plan fully acknowledges and addresses this fact by establishing the Elk River Recovery Assessment (i.e., hydrodynamic and sediment transport model from the top of the impacted reach to Humboldt Bay), and the Elk River Watershed Stewardship Program (i.e., to address a whole watershed) as integral components of the TMDL program of implementation. Without these components, the Clean Water Act would require that the TMDL be represented as a negative number and negative sediment load allocations would need to be implemented in regulatory actions.

Comment: HRC states that the TMDL Action Plan and North Coast Board responses do not give the company enough credit for its sustainable forestry practices, or its actions that treat legacy sediment discharge sites. Further, HRC contends that the TMDL Action Plan and zero load allocation places undue burden on the company and will jeopardize HRC's ability to continue its good practices. HRC does not find the North Coast Board's previous response adequate. GDRCo also claims that the TMDL as adopted would impose unnecessary and unjustified regulatory burden on timberland owners in the Upper Elk River Watershed.

Response: The North Coast Board has previously addressed these comments. In oral testimony, written responses to comments, and technical documents, the North Coast Board

has acknowledged HRC and GDRCo's improved management practices compared to previous land managers in the watershed, including their ongoing efforts to treat legacy discharge sites, which pursuant to North Coast Board orders and the Habitat Conservation Plan have successfully identified, prioritized, and treated the vast majority of road and skid trail related sediment sources. The timber companies have claimed that these operations have resulted in *net* sediment benefit via treatment of legacy discharge sites and other measures to reduce sediment. As stated previously, the Elk River Watershed is naturally a very sensitive watershed, it has been severely degraded by past management activities, continues to have sediment delivery rates above natural loading estimates, and a *net* environmental benefit is insufficient alone to initiate recovery. It is indisputable that management-related sediment discharge rates are estimated as lower in the 2004 – 2011 period (HRC took over management in 2008), as compared to the 1988 – 1997 period, the highest period of record. Though some reductions in discharge rate may be attributable to lower rainfall, the reductions are indeed likely attributable to HRC's and GDRCo's control of active discharge sites and other management improvements on their respective lands. The trend toward recovery is underway. However, sediment discharge rates in the 2004 –2011 period still exceed the system's assimilative capacity, as demonstrated by continued downstream flooding, including aggradation and loss of channel conveyance capacity. Again, HRC and GDRCo are to be applauded for their role in reducing sediment discharges from their managed timberlands. Nonetheless, the TMDL demonstrates that ongoing sediment delivery to the impacted reach is at levels that continue to exacerbate nuisance conditions and impair beneficial uses.

The companies raise concern about the zero sediment load allocation and its implementation. A zero load allocation is technically defensible and necessary to improve water quality conditions in the impacted reach so beneficial uses will be attained. A zero load allocation is supported because the impacted reaches have no further assimilative capacity. The TMDL specifically describes the zero load allocation as "conceptual" and relies on a series of measures, both regulatory and non-regulatory, to implement the zero load allocation and attain water quality objectives. A zero load allocation is intended to be accomplished by implementing best management practices and other measures as described in WDRs that control all controllable factors. Control of all controllable factors will minimize and eliminate sediment delivery impacts on beneficial uses and nuisance conditions.

The TMDL sets forth the hillslope indicators and targets that will inform permitting actions, and will be implemented in orders to the maximum extent feasible to meet the load allocation. Compliance with the TMDL can be achieved by implementing all feasible and appropriate management measures (e.g. establishing riparian buffer zones, restricting wet weather operations, limiting rates of harvest, following measures proposed in HRC's Report of Waste Discharge including those required by the Habitat Conservation Plan, and participating in watershed stewardship and assessment efforts). Through: 1) implementing best management practices and measures in waste discharge requirements and waivers of waste discharge requirements that control controllable factors; and 2) implementing downstream sediment remediation and restoration work that is necessary to restore assimilative capacity, water quality objectives will be met and the TMDL loading capacity

may be recalculated to a positive number.

Comment: Kristi Wrigley and EPIC criticize the conceptual zero load allocation. Wrigley contends that the conceptual zero load allocation is difficult for residents to understand and presents a barrier to public participation. EPIC desires the conceptual zero load allocation to be a true zero, otherwise the TMDL Action Plan and the discretion it gives the North Coast Board in implementing WDRs, will not lead to attainment of water quality standards.

Response: The North Coast Board has previously addressed these comments. The TMDL sets a loading capacity of zero because there is no assimilative capacity in the impacted reach for additional sediment without further aggradation (see Tetra Tech 2015) and harm to beneficial uses and downstream landowners. The zero load allocation is described as conceptual because no amount of hillslope or economic activity can ever reduce to zero the discharge of sediment to watercourses, in part due to natural sediment sources . As such, the TMDL sets forth numeric targets and indicators to be implemented in WDR's that employ adaptive management measures that will minimize and eliminate future sediment discharge impacts and achieve the zero sediment load allocation in a reasonable time frame.

Comment: HRC cites a presentation at the Water Quality Coordinating Committee (WQCC) Meeting in October 2017, wherein HRC states that the State Water Board provided guidance for assigning load allocations of natural constituents (such as sediment) at above a defined natural background. HRC further explains that a zero load allocation is not consistent with these guidelines as natural sources will always be above zero.

Response: This is a new comment related to comments previously submitted by HRC and addressed by the North Coast Board. First, words spoken during the WQCC meeting do not constitute official policy guidance. Secondly, the summary[7] of the meeting does not mention a discussion of TMDL load allocations for naturally occurring water quality constituents. In any case and as described in prior responses, the load allocations for the Upper Elk River are set at zero because of the lack of any assimilative capacity for the system to accept sediment inputs without exacerbating nuisance conditions. Given these conditions, the North Coast Board considered establishing a negative sediment TMDL, which would assign specific responsibility for sediment removal in the impacted reach to the permit holders in the upper watershed. The North Coast Board rejected this option in favor of the zero load allocation to be implemented in future permitting actions, with ongoing management and recovery assessment efforts designed to achieve the load allocation and restore assimilative capacity in the impacted reach.

Comment: Both CAG and HRC have commented that the TMDL has not considered climate change impacts as part of calculating load allocations.

Response: The North Coast Board has previously addressed this comment. The North Coast Board acknowledges that climate change is an important factor, especially with respect to remediation and restoration actions taken in the lower watershed. The hydrodynamic and

[7] http://www.waterboards.ca.gov/board_reference/2016fall/docs/summary_of_meeting%202.10.17.pdf

sediment transport model calibrated under the Elk River Recovery Assessment may be a valuable tool for evaluating different climate scenarios when developing a plan for remediation and restoration in the Elk River Watershed, if funded. Indeed, the Humboldt Bay sea level rise modeling work (also conducted by Northern Hydrology, similar to the Elk River Recovery Assessment) may be reasonably coupled with the Elk River modeling effort, as appropriate. Further, the Elk River Watershed Stewardship Program includes a science and monitoring subcommittee, who may be well suited to further evaluate the issue, as it relates to remediation and restoration design.
Finally, the load allocations associated with this TMDL may be recalculated in the future as more information is gathered (e.g., Elk River Recovery Assessment hydrodynamic and sediment transport modeling is completed) and downstream conditions are carefully altered via sediment remediation and channel restoration. In short, the existing information provides a reasonable basis for establishing the TMDL and the TMDL Action Plan provides for regular scheduled review, adaptive management, and recalculation, as appropriate.

E. Numeric Targets

Comment: GDRCo contests that some targets are infeasible, physically impossible, or has insufficient scientific basis. In particular, GDRCo focuses on the numeric targets related to the "100%" of hydrologically disconnected roads; "100%" of harvest areas requiring groundcover; and the riparian zone prescriptions being unnecessary to achieve water quality objectives. GDRCo states that these "admittedly unattainable" targets "will lead to confusion" during implementation by other agencies involved in THP review and approval.

Response: The comments related to the numeric targets have been raised before and the previous response re-iterated here. The purposes of the targets as described in Table 2 of the TMDL Action Plan are to: (1) inform enforceable provisions in WDRs, waivers and associated monitoring strategies by identifying the controllable water quality factors influencing each of the sediment source categories in the Source Analysis; and (2) be used as measures for assessing the overall effectiveness of the Program of Implementation for meeting the zero load allocation. The North Coast Board has discretion in tailoring appropriate BMPs and other measures to implement the numeric targets within the context of a WDR or waiver: The North Coast Board may find that certain targets are inappropriate or not feasible due to specific circumstances. The footnote to Table 2 from the TMDL Action Plan states this discretion as such: "The hillslope targets and numeric targets in Table 2 are designed to inform North Coast Board actions and can be incorporated into orders, as appropriate and to the maximum extent feasible." Within the context of adaptive management, future monitoring and study may inform new and improved ways of assessing landscape health and watershed recovery, indicators and targets of which can be incorporated into future regulatory and non-regulatory actions of the North Coast Board, as appropriate.

Comment: Kristi Wrigley comments on the numeric targets, explaining that these are directly tied to the timber companies and are difficult to achieve if upstream logging continues. Wrigley comments on the role of timber companies, explaining that only a significant reduction or cessation of timber harvest may lead to recovery of beneficial uses.

Response: The North Coast Board has previously addressed these comments. The Numeric Targets establish benchmarks upon which the Program of Implementation actions and future remediation actions will be implemented to meet the zero load allocation. The targets reflect instream and hillslope conditions that are consistent with water quality objectives, attainment of beneficial uses, and control of all controllable factors associated with the delivery of sediment. In short, the targets represent the conditions for a waterbody that are necessary to meet the load allocation in a reasonable time frame. But, they are not independently enforceable. They represent a suite of controllable factors that can be managed through the use of best management practices (BMPs) and incorporated into a WDR, for the purpose of controlling all controllable factors associated with the delivery of sediment. The load allocation as well as the numeric targets may be revisited through a future basin plan amendment as new information is gathered via the Recovery Assessment and other studies. The Program of Implementation promotes a data driven adaptive implementation approach, which could be reflected in future revisions of WDRs.

F. Program of Implementation

Comment: CAG questions the definition of a "phased" TMDL as it is described in the TMDL Action Plan. CAG asks whether the TMDL Action Plan is a phased implementation of actions necessary for water quality standards attainment or phased reduction of pollutant loading. If the latter, CAG contends that the first phase is inconsistent with the load allocation of zero.

Response: This is a new comment. EPA guidance[8] on "phased TMDLs" clarifies the definition as those TMDLs for which the State expects that the loading capacity and allocation scheme will be revised in the future as additional information is collected. Phased TMDLs are an example of adaptive implementation, thus fitting CAG's first definition. Section VII of the TMDL Action Plan schedules a five-year check-in with the North Coast Board, wherein new information will be assessed; load allocations may be reconsidered; and appropriate modifications or additions to the implementation actions may be created. In any case, the phased TMDL and the zero load allocation, in combination with downstream remediation and restoration, are designed to meet water quality standards and EPA requirements. See also previous responses regarding implementation of the zero load allocation.

Comment: CAG comments that the Program of Implementation and Technical Report discusses a Stewardship Program, but that "no programs or activity has been devised and noticed to address the severe impairments." CAG comments further on the Technical Report's mention of alternative restoration plans and new EPA guidance, saying that no such program exists. Pacific Coast Federation of Fishermen's Association (PCFFA) and Institute for Fisheries Research (IFR) echo CAG's comments on the Program of Implementation saying that the elements are "not described, permitted, or funded."

[8] US Environmental Protection Agency. (2006). Clarification Regarding "Phased" Total Maximum Daily Loads. August 2, 2006. Available at <https://www.epa.gov/sites/production/files/2015-10/documents/2006_08_08_tmdl_tmdl_clarification_letter.pdf>

Response: The North Coast Board previously has addressed the core issues raised by these comments. The activities in the Program of Implementation are already being carried out in the Elk River Stewardship Program[9] (funded by Clean Water Act 319(h) Grant) and Elk River Recovery Assessment (funded by State Water Board Cleanup and Abatement Account). New WDRs for HRC have also been adopted by the North Coast Board and revised WDRs for GDRCo are planned for late 2017. The hillslope water quality indicators, targets, and zero load allocation are incorporated into Orders through BMPs that will control controllable water quality factors in support of beneficial use attainment. The TMDL Action Plan accurately describes all of these activities in the Program of Implementation. The link provided in the Technical Report for the US EPA was for general TMDL guidance, the specific website regarding alternative restoration plans is available in the footnotes below[10].

Comment: CAG comments that the TMDL Action Plan mentions need for a monitoring plan, but the TMDL does not mandate or adequately describe such a plan.

Response: The North Coast Board previously has addressed comments on the adequacy of monitoring efforts. To summarize, one of the deliverables in the Elk River Stewardship Program grant is the development of a workplan for coordinated science and monitoring in the entire Elk River. In addition, the regulatory portion of the TMDL, as implemented in enforceable provisions in WDRs, requires dischargers to submit monitoring reports. The TMDL Action Plan adequately describes the path for monitoring in the Upper Elk to evaluate progress and effectiveness of implementation measures towards attaining the conceptual zero load allocation and meeting water quality objectives.

Comment: Jesse Noell and Stephanie Bennett comment that "The final version of the Basin Plan amendment adopted by the Regional Board accommodates waste discharge in amounts that are un-natural and cause unreasonable invasion, occupation, damage to the lives and property of residents while threatening our health safety and welfare, and denying use liberty." Specifically, they assert that the North Coast Board has inadequately responded to these concerns because the result of the TMDL will be to enlarge the channels and inadequately control sediment discharge on the discharger's lands to levels that do not interfere with beneficial uses.

Response: The North Coast Board has addressed these comments previously. In short, the commenter is blending concerns over HRC's WDR with those of the TMDL. The adopted TMDL Action Plan establishes a zero sediment load allocation (i.e., control of all controllable factors affecting sediment discharge) and promotes a program to support remediation and restoration of the impacted reach. This plan, as adopted, is designed to control all "un-natural" sediment sources to the maximum extent practicable. Further, remediation and restoration is intended to be implemented in a manner that fully supports attainment of beneficial uses, including water supplies and aquatic habitat in a reasonable time frame. The translation of the load allocation and numeric targets into enforceable provision of HRC's WDR is a separate matter that has come to the State Water Board under petition. Further

[9] http://ucanr.edu/sites/Elk_River_Stewardship/About_ERS/
[10] https://www.epa.gov/tmdl/impaired-waters-restoration-pipeline-planning

response is provided under the headings of Legal Precedent and WDR, below.

Comment: PCFFA and IFR are concerned that the actions in the Program of Implementation risk a bad precedent for future use of TMDLs in achieving water quality objectives. EPIC is similarly concerned with the reliance on non-regulatory and voluntary measures (i.e. Watershed Stewardship Program), which it believes are unlikely to achieve targets in the TMDL. In all, these commenters contend the TMDL Action Plan and its Program of Implementation does not provide reasonable assurances in attaining water quality standards and reducing nuisance flooding.

Response: The North Coast Board previously has addressed comments similar to these. The adaptive management principles in the TMDL Action Plan are not unique to the Upper Elk, having been included in other TMDLs adopted by the North Coast Board and elsewhere around the state. The Stewardship Program and Recovery Assessment are designed to assure that the appropriate planning steps are in place before taking any large-scale remediation and restoration action, which itself could threaten water quality. The non-regulatory and voluntary measures in the program of implementation are specific to remediation and restoration of the impacted reach to Humboldt Bay and are funded largely from State Water Board funds. Funding of remediation and restoration actions, once identified, designed and permitted, will be dependent on various funding sources, possibly including sizeable private contributions, including those of upper landowners. Upper watershed landowners have regulatory requirements that are constrained by a zero load allocation, until the assimilative capacity for sediment in the impacted reach can be expanded. The zero load allocation and targets, are implemented through enforceable provisions of WDRs. Only once the assimilative capacity of the impacted reach and lower watershed has been restored, can the WDRs be revised with new load allocations and targets.

Comment: Kristi Wrigley is concerned that the Stewardship Program places undue burden on residents without any real ability for residents to influence the direction of restoration. Additionally, Wrigley is concerned the timeline for the Stewardship Program (two years) is too long and the process is guided by a Steering Committee, of which residents are not explicitly included.

Response: The North Coast Board previously has addressed comments similar to these. The Watershed Stewardship Program is an open public program in which all interested stakeholders are encouraged to participate, including local residents. The Sediment Remediation Workgroup is the particular venue for discussion of restoration and the appropriate approach. Residents specifically interested in restoration are strongly encouraged to participate in these planning efforts. The North Coast Board is evaluating the configuration of the steering committee; and, as the stewardship program evolves, the North Coast Board anticipates further opportunities for resident involvement in program design.

A. Legal Precedent

Comment: Jesse Noell and Stephanie Bennett comment that the TMDL Action Plan and its actions create and maintain unreasonable and unnatural invasion and occupation of residents' lands.

Response: The commenters appear to be making a claim that by adopting a TMDL that sets load allocations for sediment in the Upper Elk River, the North Coast Board is physically invading private property and thereby affecting a taking without providing compensation. The North Coast Board's TMDL sets a zero load allocation to be implemented through waste discharge requirements and waivers. It is difficult to determine the basis of the commenter's assertion that the adoption of this regulatory requirement, and program of implementation to reduce sediment discharges to downstream segments of the Elk River, amounts to an invasion of private property or occupation of residents land. To the extent the commenter is raising private damage claims against the companies, any private claims against neighboring landowners are not issues before the North Coast Board as it lacks authority to determine responsibility or award damages in such claims.

Comment: Kristi Wrigley claims that the Regional Water Board is circumventing residents Constitutional right to live safe and secure in their homes, and the government has continued to authorize the continued activity causing the harm when they have the power to "maximally control" the rate of harm.

Response: The TMDL is a reasonable regulation, authorized by the Clean Water Act that aims to improve water quality in the Elk River. One goal of the TMDL and implementation program is to abate nuisance conditions that may affect residents' property. As noted throughout the TMDL and supporting documentation, the TMDL was adopted to improve water quality conditions in the Elk River and to address nuisance conditions on neighboring properties. The North Coast Board considered a range of options in adopting a TMDL Action Plan that would lead to attainment of water quality standards while allowing continued timber harvest activities. The North Coast Board ultimately set the TMDL and numeric targets that would allow dischargers to continue economic activity on their land while requiring feasible measures to attain the TMDL allocation and eventual support of beneficial uses in the watershed.

Comment: Jesse Noell and Stephanie Bennett contend that the TMDL Action Plan violates the anti-degradation policy and will maintain impairments to beneficial uses (specifically, domestic water supplies and fisheries) and nuisance flooding.

Response: The North Coast Board previously addressed this comment. The TMDL complies with state and federal anti-degradation policies. The North Coast Board found that the zero load allocation applied to upstream sediment sources will improve water quality and support attainment of beneficial uses over a reasonable time frame. The Program of Implementation includes adoption of waste discharge requirements for upstream landowners, recovery assessment, pilot restoration programs, watershed stewardship program, and monitoring and reporting programs to assess the effectiveness of the measures. To the extent that ongoing sediment discharges will continue to occur, the North Coast Board found that such discharges are necessary to accommodate important economic and social development in the area and are consistent with the maximum benefit of the

people of the state. In addition, individual permitting actions and large-scale restoration projects will be subject to project specific anti-degradation analyses.

Comment: HRC states that the North Coast Board has failed to consider alternatives and the economic impacts of the TMDL Action Plan.

Response: The North Coast Board previously addressed comments that suggested it had failed to consider a range of alternatives or economic impacts. As discussed in *Response to Comments on the Draft Action Plan for the Upper Elk Sediment TMDL*, the North Coast Board analyzed a range of alternative implementation measures in the Substitute Environmental Documentation (SED) and addendum it prepared and relied on to support the TMDL. The North Coast Board considered extensive public comment on its proposed implementation plan and considered alternatives ranging from a prohibition on harvest activities to phased logging and harvest activities. In addition, the North Coast Board considered measures proposed by HRC and other upstream landowners. The North Coast Board adopted a TMDL that establishes a load allocation, numeric targets and indicators that will attain water quality objectives in a reasonable time frame, while maintaining flexibility to accommodate continued land management activities in the upper watershed. The North Coast Board considered, but did not adopt a complete moratorium on logging for upslope landowners as this would have had a significant economic impact in the local communities. Instead, the North Coast Board modified the draft TMDL program of implementation to allow for adaptive management based on monitoring results, results of pilot restoration efforts and success of initial implementation measures. In its regulatory actions to implement the TMDL (primarily the adoption of WDRs), the North Coast Board relies to a large extent on measures proposed by HRC in its Report of Waste Discharge and Timber Harvest Plans approved by CalFIRE.

Comment: HRC contends that the adoption of the TMDL Action Plan as proposed would violate applicable requirements of California's Administrative Procedure Act (APA) rulemaking standards of necessity, authority, and clarity.

Response: The North Coast Board previously addressed this comment. The adoption of the amendment complies with Government Code section 11353 subdivision (b)(4), which requires basin plan amendments to meet standards of necessity, authority, clarity, consistency, reference and non-duplication. The TMDL and implementation plan are necessary regulatory tools that address impairments to beneficial uses in Clean Water Act section 303 (d) listed waterways. The North Coast Board has the authority and duty to regulate the discharges of waste within the North Coast Region. The North Coast Board works cooperatively with other agencies with regulatory authority over the landowners' activities, including the California Department of Forestry, Department of Fish and Wildlife and others. Where possible, the North Coast Board incorporates those agencies recommendations and requirements into its approvals to meet basin plan requirements and protect beneficial uses.

Comment: HRC claims that the adoption of the TMDL Action Plan as proposed does not satisfy CEQA requirements including consideration of alternatives and the unjustified

reliance on the Substitute Environmental Documentation (SED) for the Temperature Policy Basin Plan amendment.

Response: The North Coast Board previously addressed comments that the TMDL did not comply with CEQA. The North Coast Board relied on a Substitute Environmental Document that was prepared for its Temperature Policy and addendum to that document that was prepared for its Restoration Policy. The Office of Administrative Law has approved those policies. It is appropriate for the North Coast Board to rely on a previously prepared environmental document where that document complies with CEQA and State Water Board regulations, and project impacts have been adequately analyzed in prior documentation. The SED and associated addendum analyzed a variety of implementation methods including measures to control sedimentation and restoration actions. No additional impacts associated with the approval of the TMDL or program of implementation were identified. On a project-specific level, as measures are implemented, the North Coast Board will complete additional CEQA analysis as necessary. For example, in support of watershed wide waste discharge requirements the North Coast Board has prepared individual CEQA documentation, and as necessary will require additional CEQA documentation for future projects.

Comment: HRC claims that the TMDL Action Plan does not satisfy the constitutional limitations on the regulatory burden that may be imposed under United States Supreme Court decisions for the cases *Nollan v. California Coastal Commission* and *Dolan v. City of Tigard*.

Response: The North Coast Board previously addressed comments from HRC that the TMDL resulted in a compensable taking of property because the conditions did not have a sufficient regulatory nexus to the harm they aim to prevent. The North Coast Board's actions, and requirements imposed on HRC, are reasonable regulations directly related to the water quality conditions that the North Coast Board is required to address. The evidence shows the both past and ongoing operations from the upstream landowners have led to aggradation and additional sediment loads in the impaired reaches of the Elk River, creating nuisance conditions and impairing beneficial uses. The TMDL and implementation plan contain measures that will directly address the nuisance conditions and water quality impairment.

Comment: PCFFA and IFR contend that the TMDL Action Plan relies on programs that are segmented or piecemealed for CEQA review and has been substantially changed since the Mitigated Negative Declaration was prepared. All pieces of the Program should be combined as one project for CEQA review.

Response: The North Coast Board previously responded to this comment. The TMDL Action Plan acts as a regulatory framework: it establishes targets, sets load allocations, and identifies a program of implementation for meeting those targets and allocations. The substitute CEQA documentation (SED) considered the environmental impacts associated with a range of implementation measures. The SED is not intended to apply to all projects that may be necessary to implement the TMDL. The North Coast Board will evaluate the need for project specific CEQA documentation as implementation measures are proposed

and approved. For example, following the adoption of this TMDL, the North Coast Board adopted a project-specific Mitigated Negative Declaration concurrent with its adoption of watershed wide Waste Discharge Requirements issued to HRC.

A. WDR

Comment: A number of commenters raise issues directly related to the Waste Discharge Requirement Order issued to HRC (Order No. R1-2016-0004) at the November 30, 2016, North Coast Board meeting.

Response: The State Water Board received three petitions requesting review of Order No. R1-2016-0004, "Waste Discharge Requirements for Non-Point Source Discharges and Other Controllable Water Quality Factors Related to Timber Harvesting and Associated Activities Conducted by Humboldt Redwood Company, LLC in the Upper Elk River Watershed" (HRC Order.) Petitioners are: EPIC and North Group of the Redwood Chapter of the Sierra Club; PCFFA and IFR; and Jesse Noell, Stephanie Bennett, Kristi Wrigley and the Elk River Residents Association. The State Water Board has granted the petitioners' request that the State Water Board place the petitions in abeyance until March 20, 2019.
That matter is not currently pending before the State Water Board and comments that specifically pertain to the North Coast Board's adoption of the HRC Order are beyond the scope of this proceeding. In this action, the matter before the State Water Board and noticed for public comment, is the State Water Board's consideration of the North Coast Board's adoption of the Action Plan for the Upper Elk River Sediment TMDL. It is more appropriate to consider comments that address specific provisions of the HRC Order in a separate proceeding that directly concerns the North Coast Board's adoption of the HRC Order and is noticed as such.

B. Other Comments

Comment: CAG comments on the Technical Report's inclusion of an internal draft staff report, but its exclusion from the North Coast Board's website.

Response: The document that the Technical Report is referring to is the *Upper Elk River Sediment Analysis and Implementation Plan*, which is an internal draft staff report provided to the North Coast Board as part of an early briefing. This internal draft staff report served as an update to the Peer Review Draft that also included plans for implementing the TMDL. The content of the internal draft staff report is part of the administrative record for this proceeding and wholly covered and included in the Technical Report.

Comment: Kristi Wrigley and Michael Wrigley comment that the TMDL is at risk of "destroy[ing]" the economic uses of water for other landowners, prioritizing the timber companies over the residents.

Response: The goal of the TMDL Action Plan is to set forth a schedule of actions with performance criteria in order to abate nuisance conditions and recover beneficial uses in the

Upper Elk for all landowners. The North Coast Board has authority that applies generally to protecting the beneficial uses of water bodies and preventing nuisance conditions. It is not an agency or court of law that can award damages. The Recovery Assessment and Stewardship process are fundamental components of the TMDL program of implementation and are designed to examine and implement projects to abate nuisance conditions and restore beneficial uses in the impacted reach for the health and safety of the local community, and to reduce economic impacts experienced by local residents.