State of California
Regional Water Quality Control Board
North Coast Region

Bruce Ho
April 1, 2008

EXECUTIVE OFFICER'S SUMMARY REPORT
1:00 p.m., April 23, 2008 and
9:00 a.m., April 24, 2008
The Sons of Italy Weed Lodge No. 1269
Memorial Hall
155 Clay Street
Weed, California

ITEM: 13

SUBJECT: *Stream and Wetland Systems Protection Policy Update*

INTRODUCTION

The purpose of this item is to provide an update on the development of a proposed amendment—the *Stream and Wetland Systems Protection Policy* (Policy)—to the *Water Quality Control Plan for the North Coast Region* (Basin Plan). The North Coast Regional Water Quality Control Board (Regional Water Board) first identified development of this Policy as a high priority (eighth overall) for the North Coast Region during the 2004 triennial review of the Basin Plan. The Regional Water Board reiterated this need by identifying completion of the Policy as its third overall planning priority during the 2007 triennial review of the Basin Plan.

Regional Water Board staff (we) began work on the Policy in 2005 in coordination with staff of the San Francisco Bay Regional Water Board using contractors funded by grant resources provided by the U.S. Environmental Protection Agency (USEPA). Under the grant, staff from the two regional boards are developing a joint policy proposal for independent consideration by their respective regional boards. The joint policy would establish a strategy to improve protection of stream and wetland systems (i.e., streams and wetlands and their associated riparian areas) and would also improve regulatory consistency between the two Regional Water Boards.

The Regional Water Board was last provided an update on development of the Policy in June 2007. At that time a detailed description of the Policy background and need was provided to the Board. This information is available on the website for the Policy[1] and is also provided as an attachment to this report.

[1] See "Executive Officer's Summary Report for the June 2007 Board Update" under "Documents" at: http://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/stream_and_wetland.shtml

This report provides updated information on:

- Project Status;
- Summary of Proposed Policy; and
- State Water Board Coordination.

PROJECT STATUS

We are currently preparing the draft Policy (staff report and Basin Plan amendment language) for external scientific peer review, which will take place during the summer of 2008. In the fall of 2008, following completion of the peer review process, we will release a public draft of the Policy for public review and comment. We then propose to bring the Policy to the Regional Water Board for consideration and possible adoption during the late fall or winter of 2008.

SUMMARY OF PROPOSED POLICY

The proposed Policy will include new narrative water quality objectives for stream and wetland systems and a comprehensive implementation plan designed to achieve these objectives. These new water quality objectives—hydrologic connectivity, stream equilibrium, and wetland and riparian area integrity—are intended to protect the full range of stream and wetland system beneficial uses, but in particular are intended to protect three beneficial uses adopted by the Regional Water Board in 2003: Flood Peak Attenuation/Flood Water Storage (FLD), Water Quality Enhancement (WQE), and Wetland Habitat (WET).

The FLD beneficial use recognizes the ability of stream and wetland systems to provide natural flood attenuation functions, such as storing surface runoff and reducing downstream flooding; the WQE beneficial use recognizes the ability of these systems to improve water quality through functions such as erosion control, filtration and purification of pollutants, and streambank stabilization, among others; and the WET beneficial use recognizes the ability of wetlands to provide water quality functions, such as habitat for unique plant and animal communities. When these beneficial uses were adopted, the Regional Water Board did not adopt new water quality objectives or an implementation plan designed to protect them. The proposed Policy will fill this gap.

Water Quality Objectives

We are developing narrative water quality objectives for hydrologic connectivity, stream equilibrium, and wetland and riparian area integrity. These objectives will do the following:

- Hydrologic Connectivity: Protect and maintain levels of hydrologic connectivity (e.g., upstream-downstream, channel-floodplain, and surface water-groundwater connectivity) within individual waterbodies and within watersheds as a whole in such a manner as to produce the seasonal pattern and range of flows necessary to support beneficial uses.

- Stream Equilibrium: Protect and maintain the dynamic balance, or equilibrium, between sediment loads and surface water discharges, such as by protecting

and maintaining the characteristics of streams in equilibrium, including their flows, channel shapes, slopes, planforms, and floodplain areas. This objective will prevent system imbalances, which result in excessive erosion or deposition of sediment, cause nuisance, or otherwise adversely affect beneficial uses.

- Wetland and Riparian Area Integrity: Protect and maintain controllable water quality factors in wetlands and riparian areas, including the levels of vegetation and the extent of floodplains, to support stream and wetland systems and their associated water quality functions and beneficial uses.

Implementation Plan

We are developing a comprehensive implementation plan, which will utilize existing permitting mechanisms (e.g., waste discharge requirements, section 401 water quality certifications of dredge and fill material discharges, and NPDES stormwater permits) and regulatory reviews (e.g., CEQA and timber harvest plan reviews) to achieve the proposed narrative water quality objectives and protect and restore stream and wetland system beneficial uses. The implementation plan will include the following:

- General Framework for Protection: The implementation plan will provide a reasonable framework for protecting stream and wetland system beneficial uses based on sequential avoidance, minimization, and mitigation of impacts.

- Identification Methods: The implementation plan will provide standard identification methods for streams, wetlands, and riparian areas. These methods will identify perennial, intermittent, and ephemeral waters subject to the requirements of the implementation plan and clarify differences between state and federal waters.

- Permit Performance Criteria: Consistent with the general framework, the implementation plan will provide permit performance criteria to evaluate avoidance and minimization of impacts on stream and wetland systems. Performance criteria will be used to evaluate compliance with narrative water quality objectives in existing permitting mechanisms. Site-specific and watershed-level performance criteria will aid the Regional Water Board in evaluating direct, secondary, and cumulative impacts from individual projects and across multiple permits. Performance criteria will also include restoration goals.

- Mitigation Requirements: Consistent with the general framework, the implementation plan will also require mitigation for adverse impacts on stream and wetland system areas, functions, and beneficial uses that cannot be avoided or further minimized (i.e., where permit performance criteria are not met).

- Monitoring and Adaptive Management: The implementation plan will require monitoring as necessary to assess compliance with permit performance criteria and mitigation requirements. The implementation plan will require adaptive management in response to monitoring results as necessary to achieve compliance with water quality objectives.

- Local Watershed Planning: The implementation plan will encourage local agencies to incorporate stream and wetland system protection measures consistent with the Policy into their general and specific plans and ordinances. Possible future compliance measures under the implementation plan may include development of new permitting mechanisms (e.g., new general WDRs or conditional waivers of WDRs) for projects covered by local plans and policies consistent with the proposed water quality objectives and associated implementation plan requirements.

STATE WATER BOARD COORDINATION

Throughout the Policy development process, we have coordinated with the staff of the State Water Resources Control Board (State Water Board) to ensure consistency between the Policy and statewide plans and policy goals. Many elements of the proposed Policy may have statewide applicability and State Water Board staff, and the State Water Board itself, has been supportive of the Regional Water Boards' ongoing efforts.

In 2006, the State Water Board directed the North Coast Regional Water Board to continue development of the Policy when it adopted Resolution No. 2006-0046 approving the Scott River Watershed TMDLs.[2] The State Water Board continued its support for the Policy by providing state contract funds in 2007 to support Policy development.

On April 15, 2008, the State Water Board will consider a resolution supporting development of a statewide "Wetland and Riparian Area Protection Policy" (State Policy) in concert with the Regional Water Boards.[3] The State Policy "will ensure the protection of the vital beneficial services provided by wetlands and riparian areas" through an approach "that is watershed-based and that extends to all perennial, intermittent, and ephemeral watercourses, including wetlands, from headwater regions to lowland river mouths." The draft resolution supports the establishment of a State Policy development team consisting of State and Regional Water Board staff. The development team would be instructed to "consider and utilize relevant plans, policies, and technical documents already adopted or being developed by the Regional Water Boards" (e.g., the *Stream and Wetland Systems Protection Policy*). The resolution would further establish that "At all phases, the [State] Policy is intended to complement and support Region-specific plans and policies to protect wetlands and riparian areas and should recognize the Regional Water Boards' essential role in implementing and informing statewide policy."

We will continue to work with State Water Board staff throughout the development of our proposed regional Policy and the State Policy. Furthermore, the regional Policy will complement and inform the State Policy by proposing new water quality standards for stream and wetland systems and implementation strategies to achieve statewide and regional goals.

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[2] The resolution is available online at: http://www.waterboards.ca.gov/resdec/resltn/2006/rs2006_0046.pdf.

[3] The State Water Board was originally scheduled to consider this resolution at its March 18, 2008, but the item was postponed until the April 15, 2008, meeting. The draft resolution is available online at: http://www.waterboards.ca.gov/cwa401/docs/wrapp2008/draft_item_resolution.pdf.

PRELIMINARY STAFF RECOMMENDATION: This is a written informational item. No formal Regional Water Board action is necessary at this time.

(040308_BH_SWSPP_EOSR)

ATTACHMENT TO ITEM 2:

STREAM AND WETLAND SYSTEMS PROTECTION POLICY
BACKGROUND AND NEED

(This is an excerpt from the Executive Officer's Summary Report for Item 1—Stream and Wetland Systems Protection Policy—of the June 13, 2007, meeting of the North Coast Regional Water Quality Control Board. The full report is available online at: http://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/060525swspp/070618_swspp_eosr_053007.pdf.)

Stream and wetland systems, which include streams and wetlands and their associated riparian areas, play a significant role in protecting water quality by providing functions that support beneficial uses. Protection and restoration of these functions is important for protecting and enhancing the Region's water quality today as well as for providing for the long-term sustainability of beneficial uses. For example, protecting and restoring the flood attenuation and groundwater recharge functions of stream and wetland systems will reduce future impacts on beneficial uses as a result climate change, which is predicted to cause water supply shortages and increasingly frequent and severe storms and floods.[4]

Discharges and land use activities that impact stream and wetland systems may degrade beneficial uses through the loss or impairment of stream and wetland system functions, which include:

- Flood attenuation;
- Groundwater recharge and discharge;
- Water supply;
- Sediment transport and storage;
- Streambank stabilization;
- Pollutant filtration;
- Energy cycling;
- Nutrient cycling;
- Temperature and microclimate control; and
- Maintenance of plant and animal communities.

California's Porter-Cologne Water Quality Control Act and the federal Clean Water Act (CWA) require the Regional Water Board to address discharges and activities that impact water quality, including stream and wetland systems disturbance, through its various regulatory programs, which include the:

- 401 Water Quality Certification Program;
- National Pollutant Discharge Elimination System (NPDES);
- Storm Water Program;

[4] For predicted impacts of climate change on water resources, see, e.g., California Department of Water Resources, 2006, *Progress on Incorporating Climate Change into Management of California's Water Resources*, available online at: http://www.climatechange.ca.gov/documents/2006-07_DWR_CLIMATE_CHANGE_FINAL.PDF (accessed on May 17, 2007).

- Timber Harvest Permit (THP) review process;
- Nonpoint Source Pollution Control Program;
- Total Maximum Daily Load (TMDL) Program; and
- Development of Waste Discharge Requirements (WDRs) and Conditional Waivers of WDRs.

Although the Regional Water Board currently regulates many stream and wetland system disturbances under these programs, there is inconsistent regulatory application between different permits, activities, and programs, as well as many unregulated impacts, due to the lack of a region-wide policy framework for stream and wetland systems protection. The absence of an effective framework for protecting stream and wetland systems has resulted in a piecemeal approach to stream and wetland systems protection. This approach is unable to address cumulative impacts and water quality protection and restoration at the watershed level.

As a result, impacts on stream and wetland systems have degraded water quality in many of the Region's watersheds. Statewide, losses of wetlands and riparian areas and their associated functions and beneficial uses are estimated at between 85 and 98 percent of their historic values,[5] and ongoing degradation of these areas continues to threaten water quality. According to the 2006 Clean Water Act (CWA) section 303(d) list of water quality limited segments,[6] riparian area disturbance (e.g., removal of riparian vegetation) is a contributing factor in 86 percent of temperature and 75 percent of sediment impairments in the North Coast Region. The 303(d) list also identifies hydromodification, streambank modification, and draining and filling of wetlands as significant stressors in many of the Region's watersheds.

The 303(d) list is used by the Regional Water Board to identify those waterbodies for which it must develop TMDLs and accompanying action plans to achieve these TMDLs. TMDL action plans are watershed-specific solutions to alleviate or prevent stressors that contribute to water quality impairments; however, the 303(d) list shows that sediment and temperature impairments across watersheds are frequently linked to similar stressors on stream and wetland systems. Staff has observed that the actions required to address these impairments in different watersheds frequently involve similar stream and wetland system protection and restoration efforts. Based on these observations and the high number of sediment and temperature impaired waterbodies in the Region, the Regional Water Board directed staff during the 2004 triennial review of the Basin Plan to develop a Basin Plan amendment that will provide a region-wide framework for addressing stream and wetland system water quality. This amendment is priority number eight from the 2004 triennial review workplan.[7]

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[5] See Dahl, T. E., 1990, *Wetlands Losses in the United States 1780s to 1980s*, Washington, DC: U.S. Fish and Wildlife Service, available online at: http://www.npwrc.usgs.gov/resource/wetlands/wetloss/ (accessed May 17, 2007); and Riparian Habitat Joint Venture, 2004, *The riparian bird conservation plan: a strategy for reversing the decline of riparian associated birds in California*, ver. 2, California Partners in Flight, available online at: http://www.prbo.org/calpif/pdfs/riparian_v-2.pdf (accessed May 17, 2007).

[6] The final 2006 303(d) list for the North Coast Region is available online at: http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/final/r1_final303dlist.pdf (accessed on May 17, 2007).

[7] The *2004 Triennial Review Priority List and Workplan* is available online at: http://www.waterboards.ca.gov/northcoast/programs/basinplan/070704trirev/FinalTable1.pdf (accessed May 17, 2007).

The North Coast Regional Water Board has since identified this amendment as a future implementation instrument to achieve the Scott River Watershed Temperature and Sediment TMDLs and the Shasta River Basin Temperature and Dissolved Oxygen TMDLs. The State Water Resources Control Board (State Water Board) also directed the Regional Water Board to continue development of the *Stream and Wetland Systems Protection Policy* in Resolution No. 2006-0046 approving the Scott River Watershed TMDLs.[8]

During the 2004 triennial review of the *Water Quality Control Plan for the San Francisco Bay Region*, the San Francisco Bay Regional Water Board also identified the development of a policy to protect stream and wetland systems as a high priority for its region. Because neither the North Coast nor the San Francisco Bay Regional Water Boards had available staff to develop these amendments following their triennial reviews, they jointly applied for and received a grant from the U.S. Environmental Protection Agency (USEPA) to develop an amendment for both regions. The USEPA grant is funding two contract staff (i.e., one in each region) through the San Francisco Estuary Project (SFEP) to help the Regional Water Boards develop a *Stream and Wetland Systems Protection Policy* amendment. These contractors have been working on the amendment since September 2005. The original USEPA grant will expire in September 2007; however, the Regional Water Boards recently received a second grant from the USEPA, which will allow the contract staff to continue developing the *Stream and Wetland Systems Protection Policy* for an additional year beyond the original contract term.

The specific stream and wetland system issues faced by the North Coast and San Francisco Bay Regional Water Boards vary based on the geology and land use within their Regions' watersheds; however, as noted above, many sediment and temperature impairments are caused by similar stressors on stream and wetland systems. Furthermore, staff's research shows that many of the ecological processes that occur in stream and wetland systems are important across different watersheds and between Regions. Therefore, staffs from both Regions have coordinated their background scientific research as well as development of the amendment framework, which is based on this research.

The amendments proposed in each Region likely will share significant similarities, but some implementation actions will vary based on the specific concerns and conditions within each Region, as identified by the Regional Water Boards, staff, and the public during the amendment development and adoption processes.

[8] State Water Board Resolution No. 2006-0046, is available online at: http://www.waterboards.ca.gov/resdec/resltn/2006/rs2006_0046.pdf (accessed May 17, 2007).