

Public Hearing on Resolution No. R1-2016-0017

To consider adoption of an amendment to
the Basin Plan to include the Action Plan
for Upper Elk River Sediment TMDL

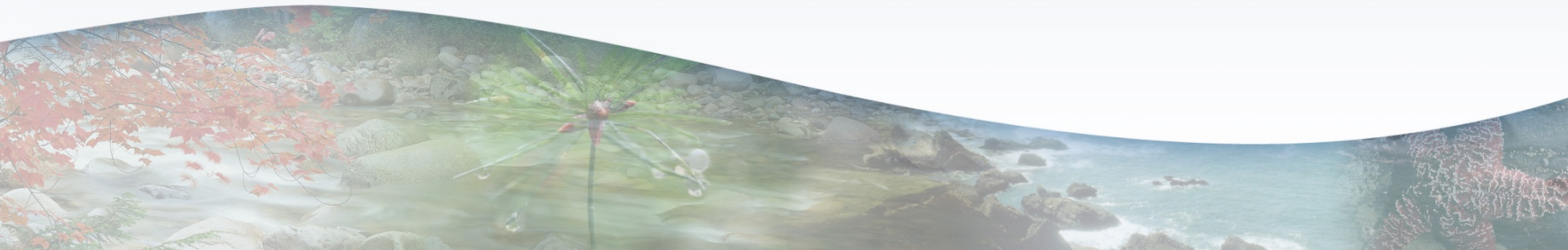
Item No. 5

Alydda Mangelsdorf,
Senior Environmental Scientist



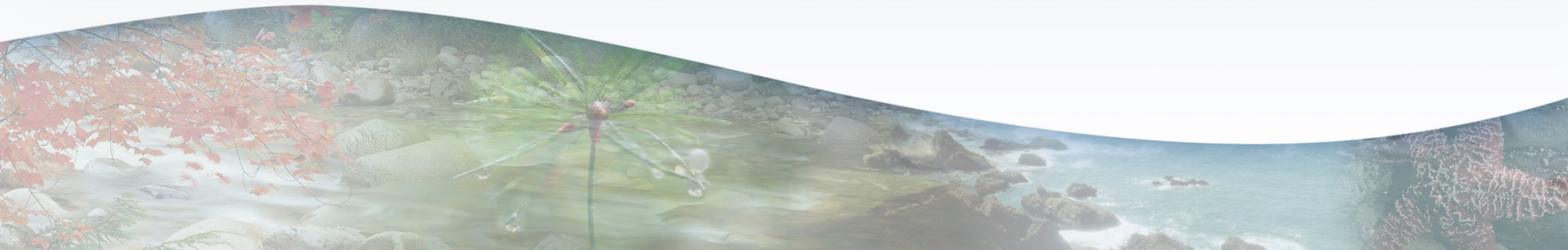
Presentation Overview

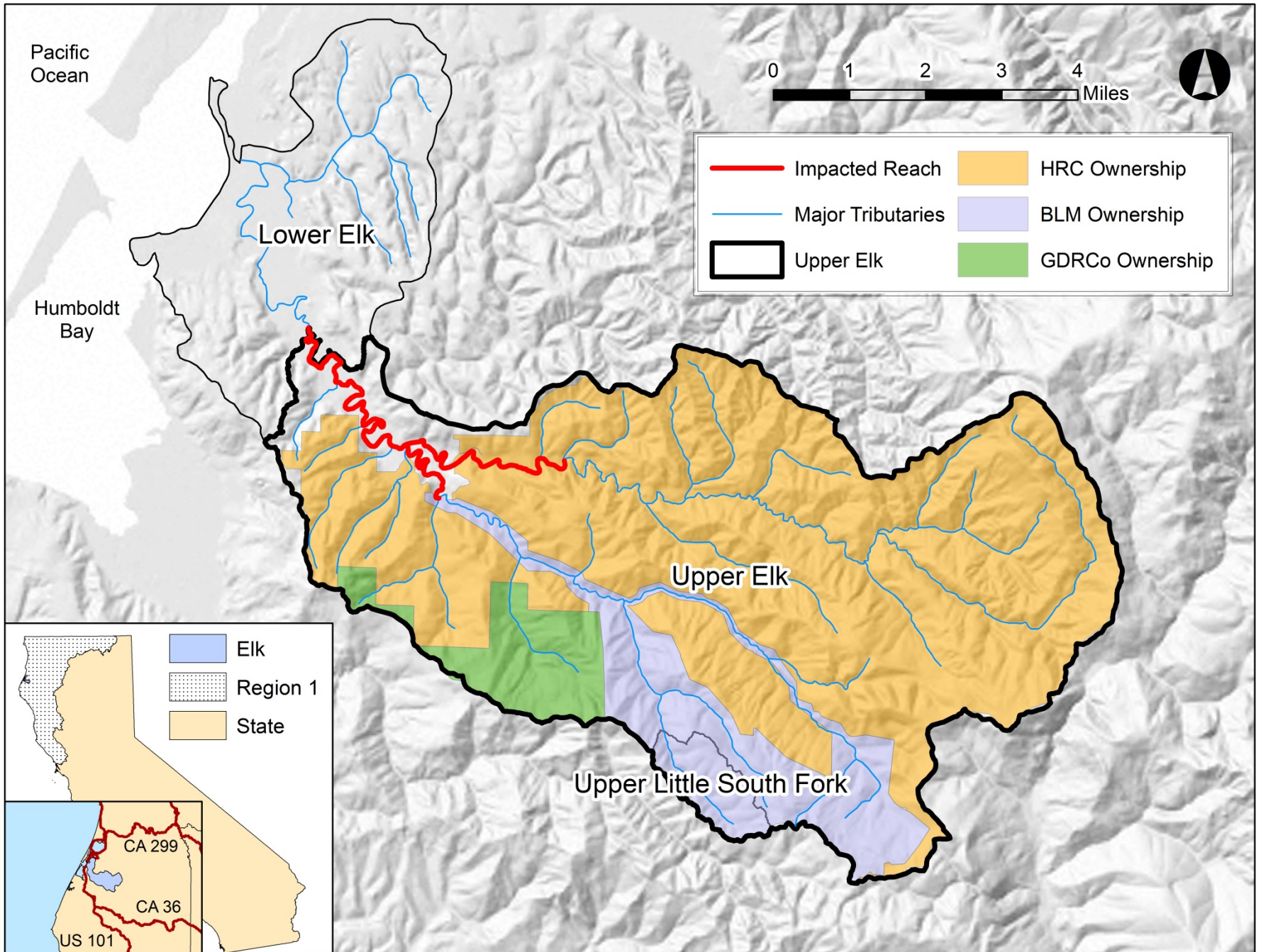
Topic	Presenter	Estimated Time
Action Plan for Upper Elk River Sediment TMDL	Alydda Mangelsdorf, Senior Environmental Scientist with RWQCB	20 minutes
Elk River Recovery Assessment	Darren Mierau, North Coast Program Director for CalTrout	10 minutes
Elk River Watershed Stewardship Program	Hank Seemann, Deputy Director of Environmental Services for Humboldt County	10 minutes
Wrap-up and Questions	Alydda Mangelsdorf	5 minutes



Action Plan for Upper Elk River Sediment TMDL

1. Summary of TMDL Development Process
 - August 2015, November 2015, and February 2016 workshops summarized science and individual TMDL components
2. Review of Adoption Package
3. Overview of Public Comments
 - Comment deadline February 15, 2016
 - Change Sheet
4. Review of Revisions to Draft Action Plan

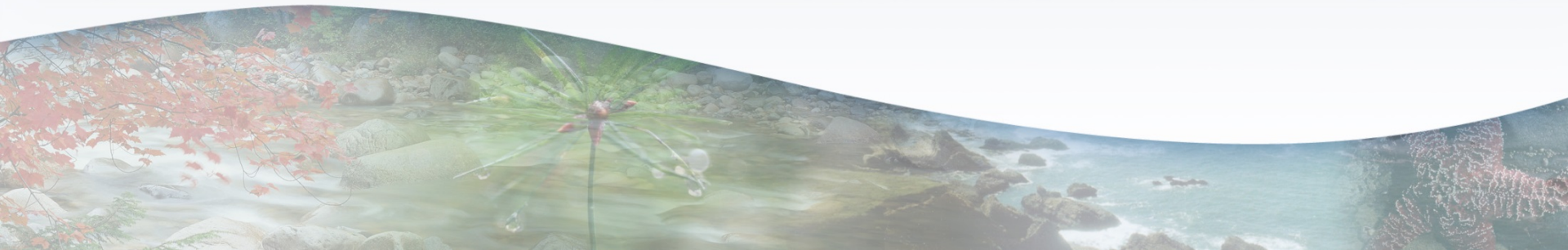




TMDL Development Process

Sediment Impairment

- Elk River listed on the 303(d) list as impaired for sediment in 1998
- Large-scale landscape disturbance in the 1988-1997 period resulted in unprecedented discharges of sediment
- Sediment and sedimentation led to impacts to water supplies, cold freshwater aquatic habitat, and recreation
- Sedimentation led to excessive rates of annual flooding of private and public property that constitutes nuisance conditions under Porter Cologne





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Photo Credit: Jesse Noelle



Photo Credit: Jesse Noelle
January 17, 2016



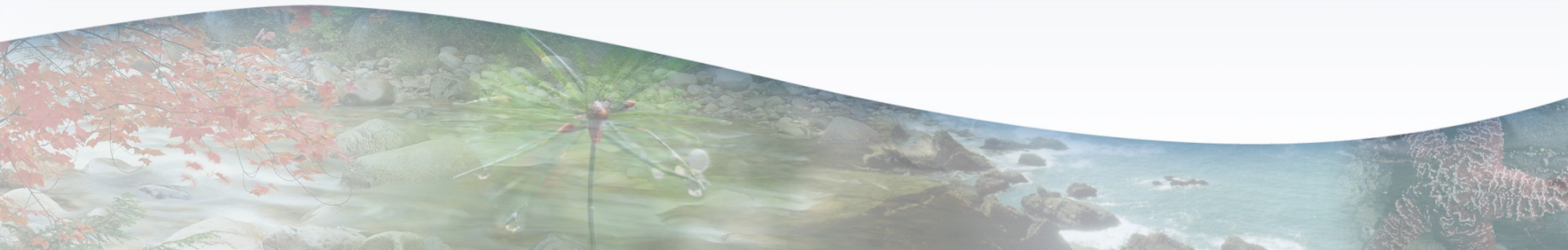
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Photo Credit: Jesse Noelle

TMDL Development Process

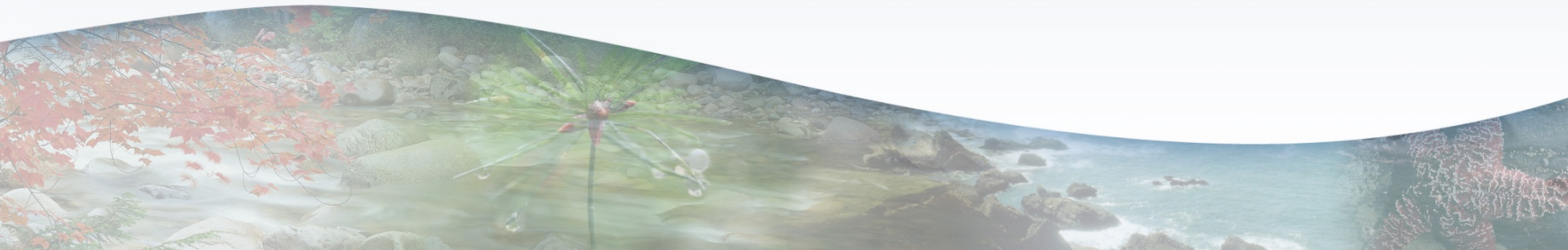
Source Analysis

- Water quality monitoring and assessment beginning in 1997
 - Confirmed impairment and nuisance flooding
 - Identified and estimated rates of sediment discharge from individual sediment source categories in upper watershed over time
 - Confirmed continued discharge of controllable sources of sediment
- Independent Scientific Review Panel assessed watershed condition and issued reports in 2002 and 2003
- Regional Board adopted several CAOs, including 1997 and 1998 CAO to address drinking water supplies
- Regional Board adopted watershed-wide WDRs in 2006



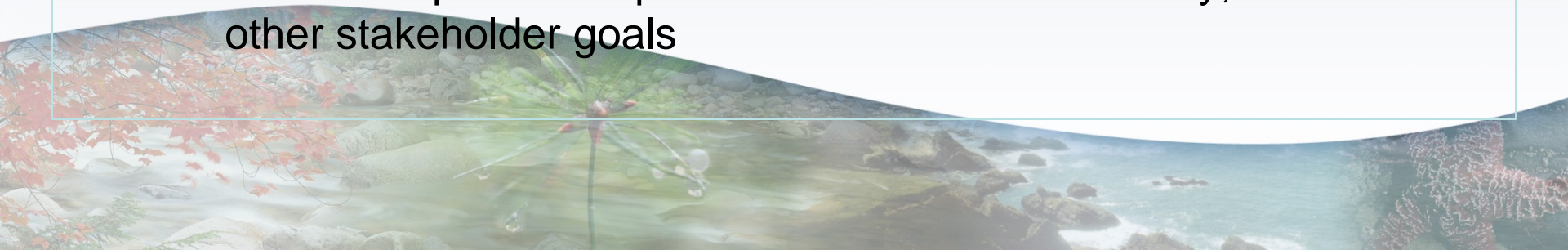
TMDL Development Process

- Petition to the Board in 2004 to dredge sediment in impacted reach
 - 2012 Elk River Restoration Summit to vet ideas for supporting remediation and restoration in the lower watershed
 - 2014 State Board funded of *Elk River Recovery Assessment*
 - 2015 State Board funded of *Elk River Watershed Stewardship Program*
- TMDL development from 2006 to 2015
- Scientific Peer Review of TMDL analysis in 2013
- Tetra Tech synthesis of scientific analyses in 2015
- Draft TMDL Action Plan in December 2015



TMDL Development Process

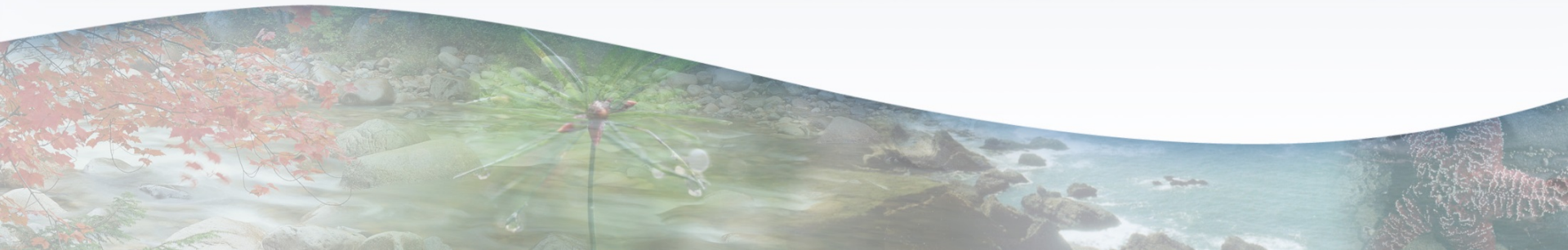
- Proposed TMDL Action Plan available March 2016
 - No current assimilative capacity for additional sediment in the impacted reach
- Program of Implementation include 3 components:
 - Adoption of WDRs and waivers of WDRs to control remaining management-related sediment discharges from the upper watershed
 - *Elk River Recovery Assessment* to assess existing and future recoverable conditions from the top of the impacted reach to Humboldt Bay
 - *Elk River Watershed Stewardship Program* as a stakeholder driven process to implement remediation and restoration actions from the top of the impacted reach to Humboldt Bay, as well as other stakeholder goals



TMDL Development Process

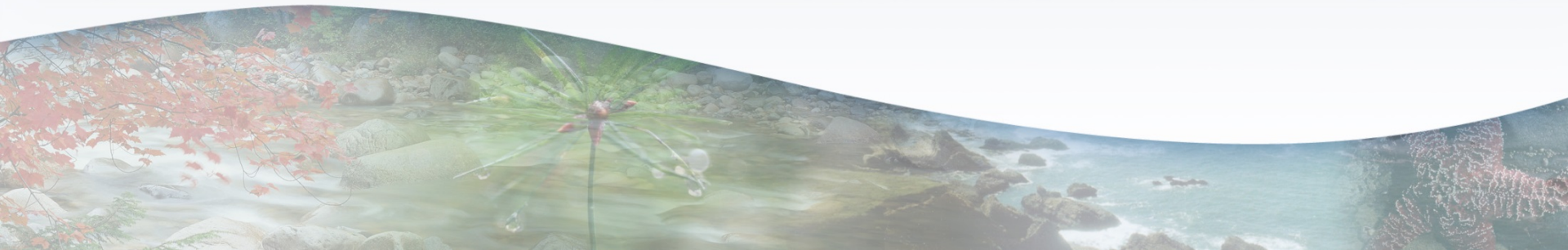
Public Outreach

- Scientific Peer Review Draft TMDL Staff Report
 - Staff responses to peer reviewers and informal public comments
- Public Meetings
 - CEQA scoping meeting held in April 2009
 - TMDL workshops in: 2012 (March); 2013 (March); 2014 (May and June); 2015 (August and November); 2016 (February)
- Public Hearing
 - April 7, 2016
 - Staff responses to public comments



TMDL Adoption Package

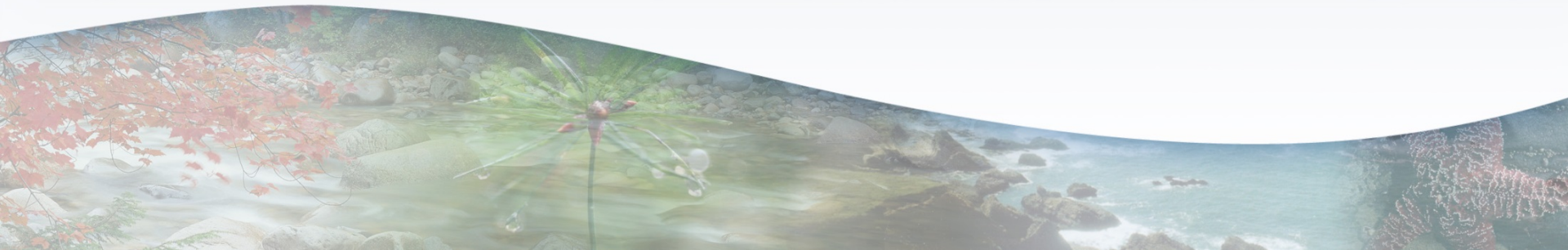
- Resolution No. R1-2016-0017
 - Adopt the TMDL Action Plan
 - Recommend the Little South Fork Elk for delisting
- Proposed Action Plan for Upper Elk River Sediment TMDL as amendment to Basin Plan
- Supporting documentation includes:
 - Tetra Tech Report (October 2015)
 - Response to Public Comments
 - CEQA documentation



Public Comments

General Areas of Agreement

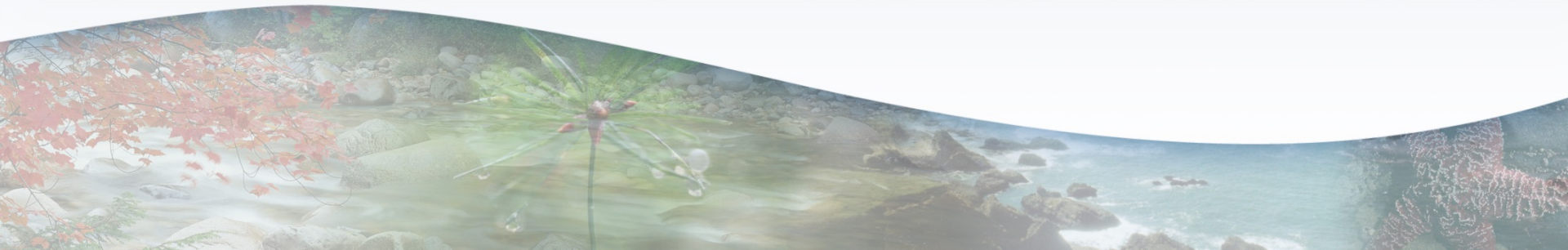
- Beneficial use impairment
- Impacts to human health and welfare, public and private property, and free use of property
- Sedimentation of impacted reach
- Need for sediment remediation, instream restoration, and other actions to protect human health and safety
- Support for a Watershed Stewardship Program



Public Comments

Differences of Opinion

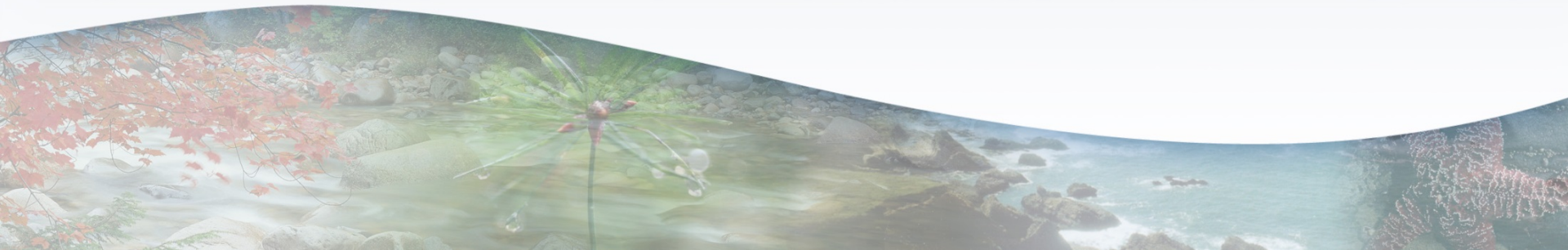
- Role of lower river landuses in system disequilibrium
- Relative importance of natural loading
- Role of ongoing sediment delivery
 - Effect of improvements in land management
 - Effect of precipitation, annual flows, peak flows



Public Comments

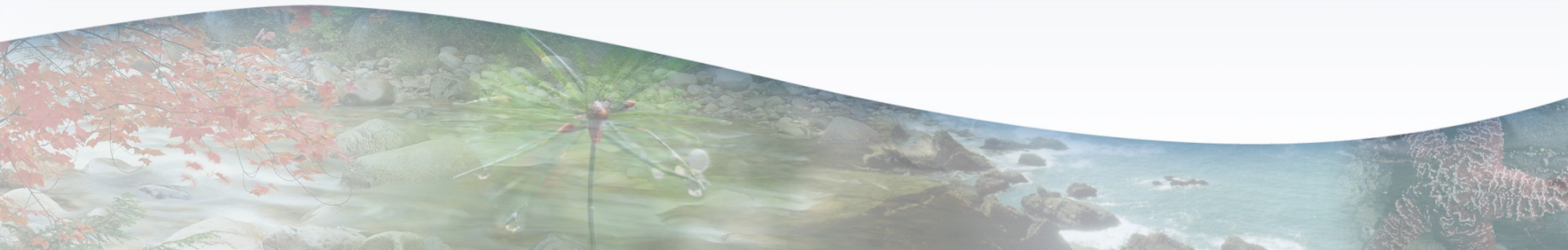
Differences of Opinion

- Function of Water Quality Indicators and Targets
- Effect of analytical uncertainty
- Alternatives to the proposed Program of Implementation

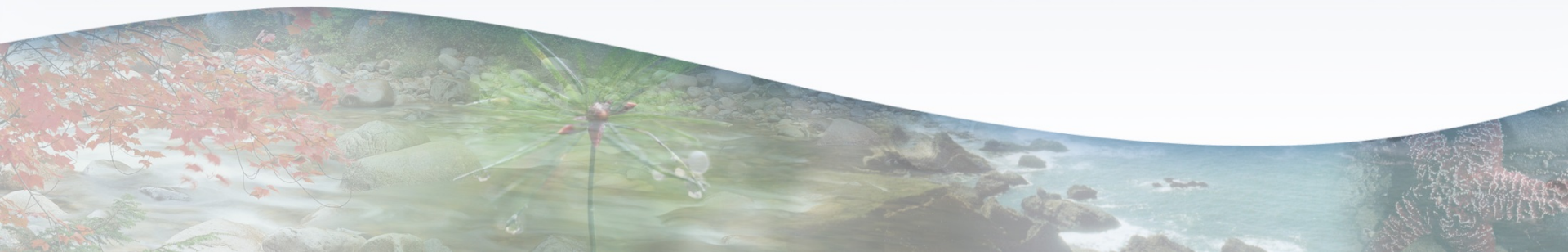


North Coast Sediment TMDLs

- Garcia River
- Noyo River
- Albion River
- Big River
- Gualala River
- Eel River, all forks
- Van Duzen River
- Mad River
- Mattole River
- Navarro River
- Redwood Creek
- Scott River
- Ten Mile River
- Trinity River
- South Fork Trinity River

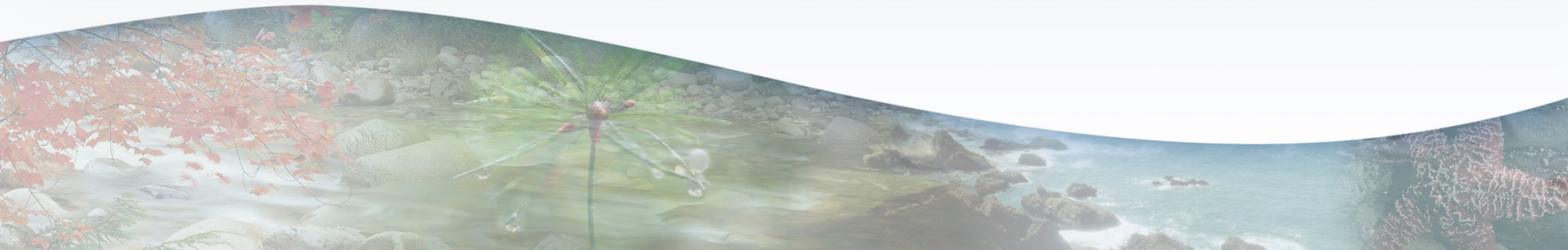


Proposed Hillslope Targets	Adopted Hillslope Targets
100% Hydrologic disconnection	≥90%, ≥99%, 100%
Zero Harvest-related deep-seated landslides	No activities in unstable areas; no risk of sediment delivery
No increase in drainage network	No activities in unstable areas; no risk of sediment delivery
Zero new Management-related discharge sites	No management-related discharge sites
Zero Harvest-related surface erosion	No discharge of controllable sediment sources



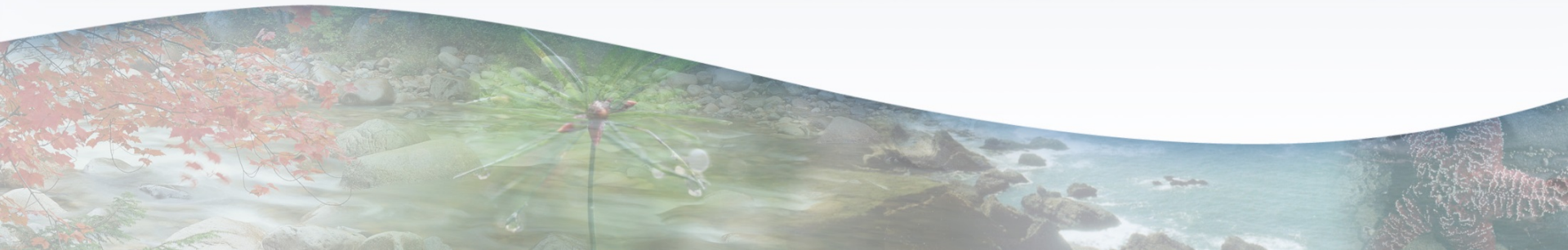
Analytical Uncertainty

- Multiple reputable partners
- Watershed-specific analyses
 - Extensive dataset
 - Conservative assumptions to account for uncertainty
- Continued monitoring and analysis
 - Discharge monitoring
 - *Elk River Recovery Assessment*
 - *Elk River Watershed Stewardship Program*, Science and Monitoring Workgroup



Alternative Programs of Implementation

- Plan “B” for Humans and Fish
 - Watershed Stewardship, with expanded opportunity for residents, environmental groups, and fishermen
 - Moratorium on timber operations until remediation and restoration is complete
- Downstream remediation and restoration
 - Voluntary Watershed Stewardship
 - No changes to existing timberland management



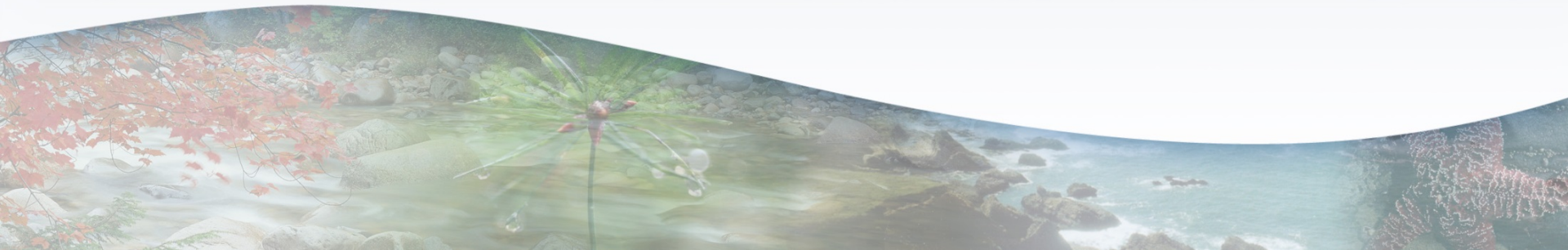
Revisions to Draft Action Plan

- Introduction
 - Watershed area addressed by the TMDL
- Problem Statement
 - Variety of factors influencing sediment and sedimentation in the Elk River Watershed
 - Area described as the impacted reach
- Source Analysis
 - Robust nature of Elk River datasets, data analyses and watershed assessments
 - Reasonable basis for establishing TMDL and load allocations
 - Uncertainty, margin of safety requirements, adaptive management, and phased TMDL
 - Reduction in sediment delivery in 2004-2011 time period



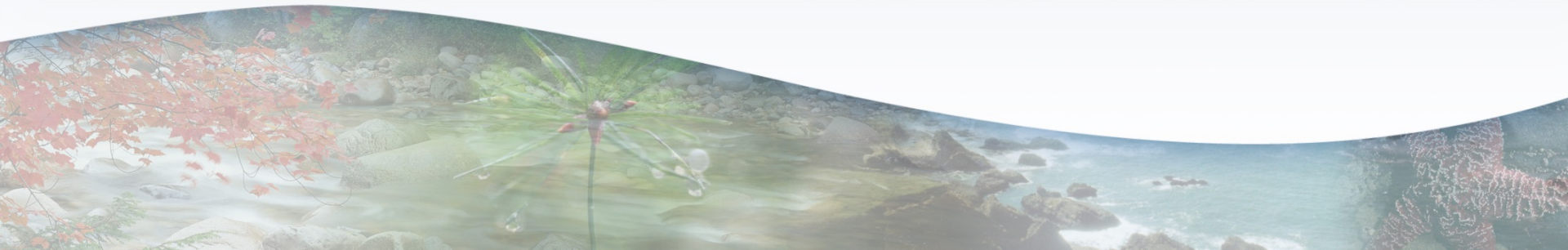
Revisions to Draft Action Plan

- Water Quality Indicators and Targets--No revisions
- Sediment TMDL and Load Allocation, including Margin of Safety and Consideration of Seasonal Variation
 - More detailed explanation of the margin of safety
- Watershed Efforts--No revisions
- Program of Implementation
 - Description of Watershed Stewardship Program to match most recent language of Steering Committee
 - Schedule
- Monitoring and Adaptive Management-- Editorial revisions



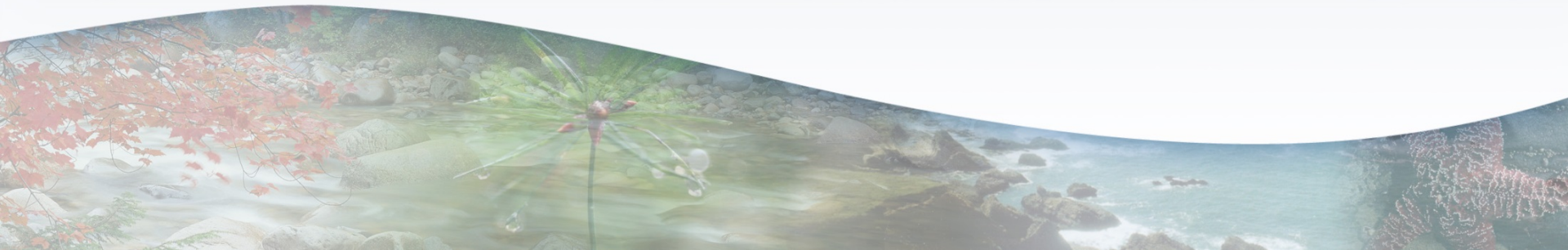
Change Sheet

- Resolution No. R1-2016-0017
 - Modification of Finding #3 to make clear that adoption of a TMDL as a basin plan amendment requires approval of State Board and OAL
- Proposed Basin Plan Amendment
 - Editorial changes to Section VI and VII to align the description of the Elk River Watershed Stewardship Program with language vetted by the Steering Committee
- Response to Comments
 - Modifications to Issue and Response A.4 regarding use of Little River data



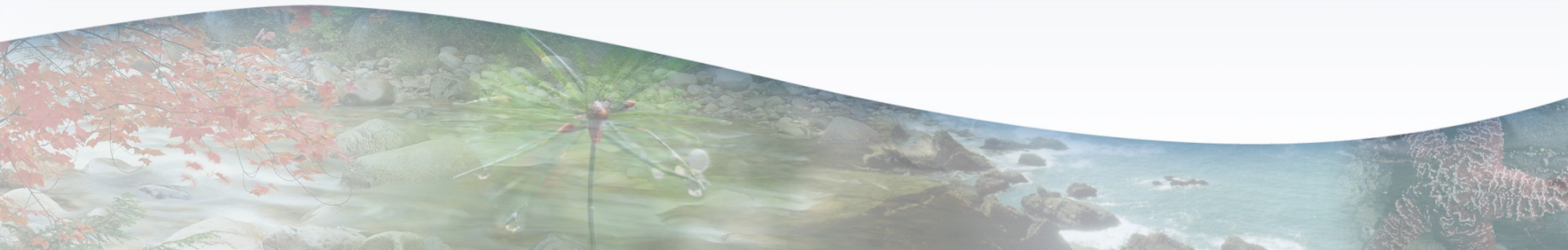
Next Speakers

- Darren Mierau, North Coast Program Director for CalTrout
 - Purpose and status of the *Elk River Recovery Assessment*
- Hank Seemann, Deputy Director of Environmental Services for Humboldt County
 - Purpose and status of the *Elk River Watershed Stewardship Program*



Staff Recommendation

Adopt Resolution No. R1-2016-0017
and the Action Plan for Upper Elk
River Sediment TMDL as an
amendment to the Basin Plan



For Further Information

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Elk River TMDL webpage

http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/elk_river/

