DOUGLAS AND HEIDI COLE AND MARBLE MOUNTAIN RANCH – WASTE AND UNREASONABLE USE HEARING

November 13, 2017

Stormer Feiler
Testimony Exhibit WR-13
Senior Environmental Scientist Specialist
North Coast Regional Water Quality Control Board
I have taken the oath and have no changes to make to my testimony.

Contents

- Case History
  - Complaint
  - February 12, 2015 RWB and Division staff inspection
- Inspection findings-CWA and California Water Code Relevance
- RWB Approach Based Upon Case History and Inspection Findings
  - Draft CAO
    - Interim Negotiations- Discharger Based Compliance Schedule
  - Final CAO
    - Directives and Compliance Schedule
    - Compliance to date
    - Outstanding Deliverables
- Water Quality and Beneficial Uses Relevant to Diversion

Case History

Regional Water Board involvement complaint driven

- Complaint received in January of 2011
  - alleged repeated failures of the diversion impacted aquatic resources in the Klamath River and its tributaries through excessive sediment loading.

- Initial response –staff assigned to engage in ongoing stakeholder process

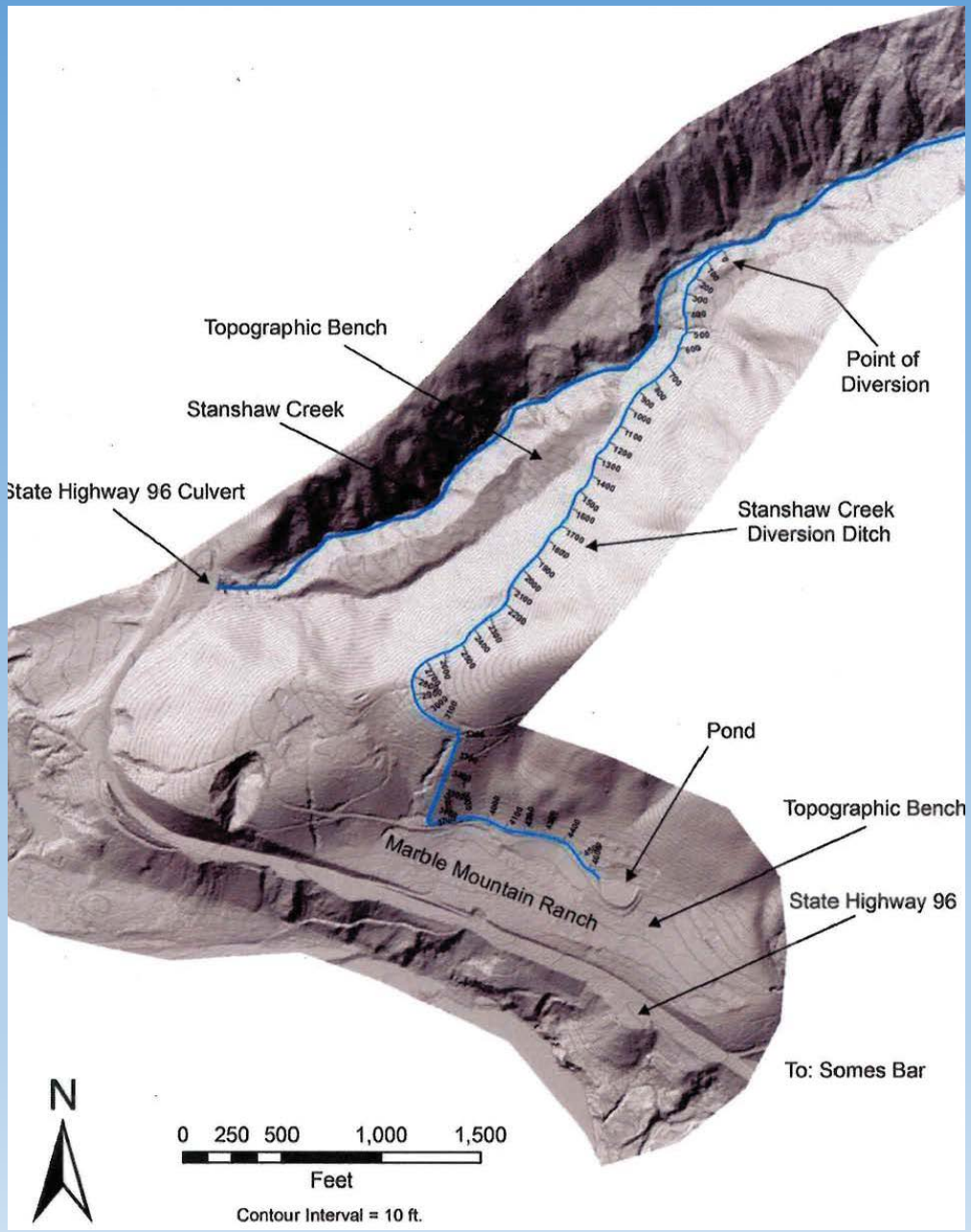
- 2015 Division of Water Rights requests collaboration
- Site assessment- Division and RWB February 12, 2015 inspection

Regional Water Board Inspection Findings

- On February 12, 2015, I inspected the Marble Mountain Ranch diversion with Division staff and observed:
  - -sediment discharges-ditch operation and management
  - -potential for sediment discharges from the diversion ditch
  - -erosion at the Irving Creek outfall.
- Failure causes:
  - Cut bank slumps-
  - Seepage of diverted water- berm saturation leads to failure
  - Cumulative ditch capacity losses
- Irving Creek Outfall lack of structural controls
  - Active Erosion of Head Cut and Stream Channel

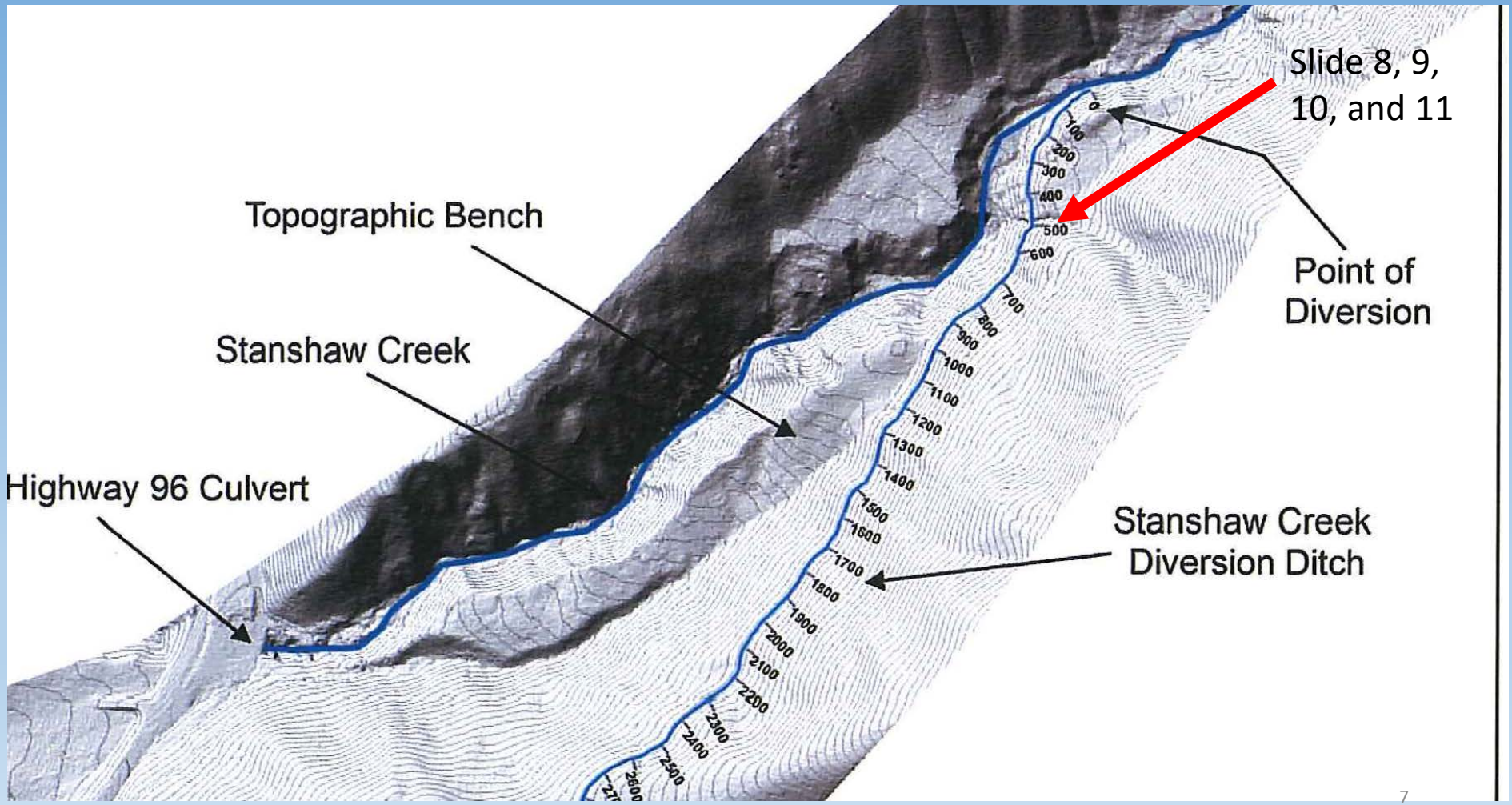
Brief Overview of inspection observations-

Diversion Overview

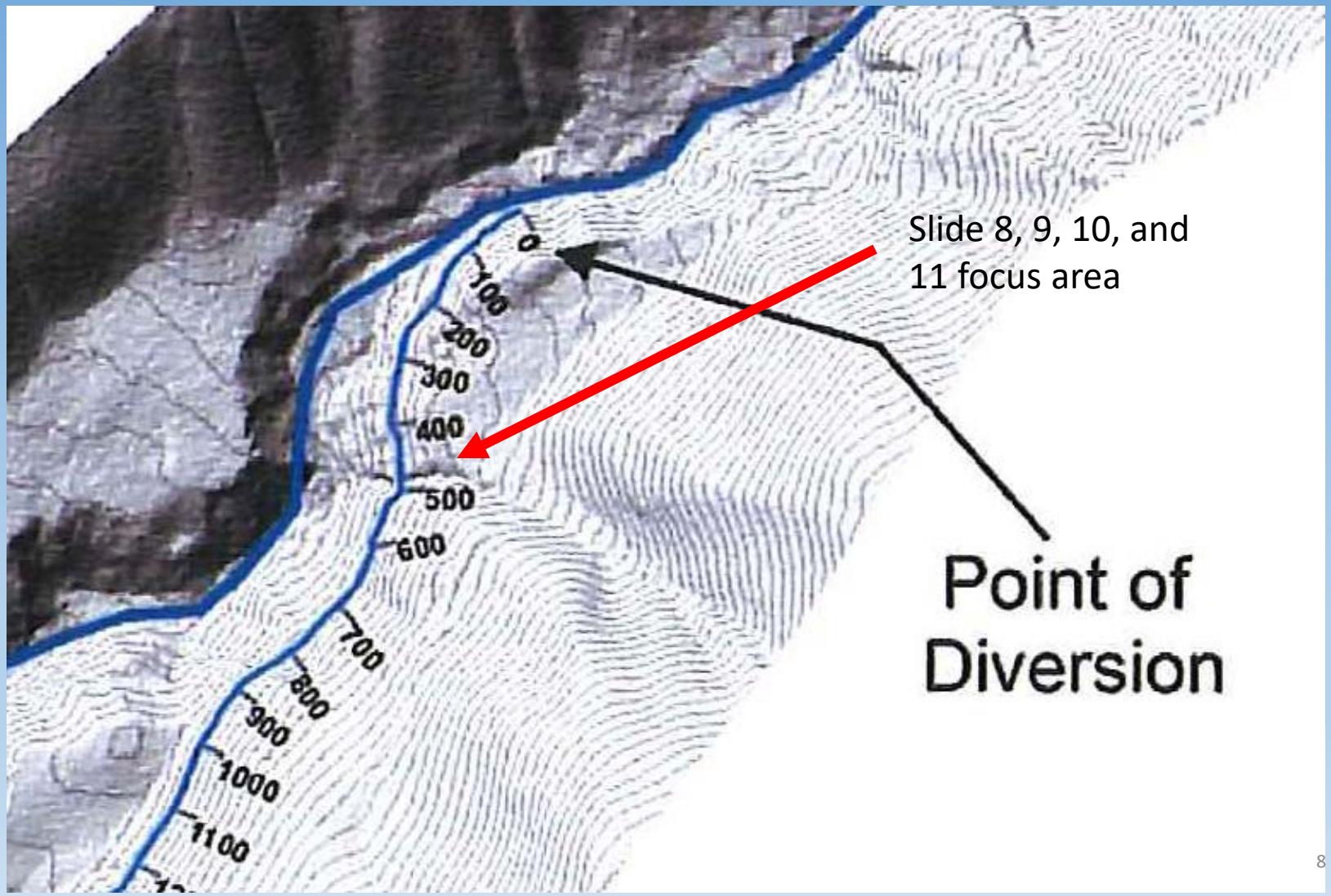


Marble Mountain Diversion (2.23.cfs) Stanshaw Creek, Class I Stream

Lidar Imagery of first 1000+ feet of diversion



Lidar image - Slide 7,8,9, and 10 focus area



Marble Mountain Ranch
Diversion Relief Culvert

Marble Mountain Diversion stream diversion discharge

Marble Mountain Diversion
Stream Flows Under Diversion

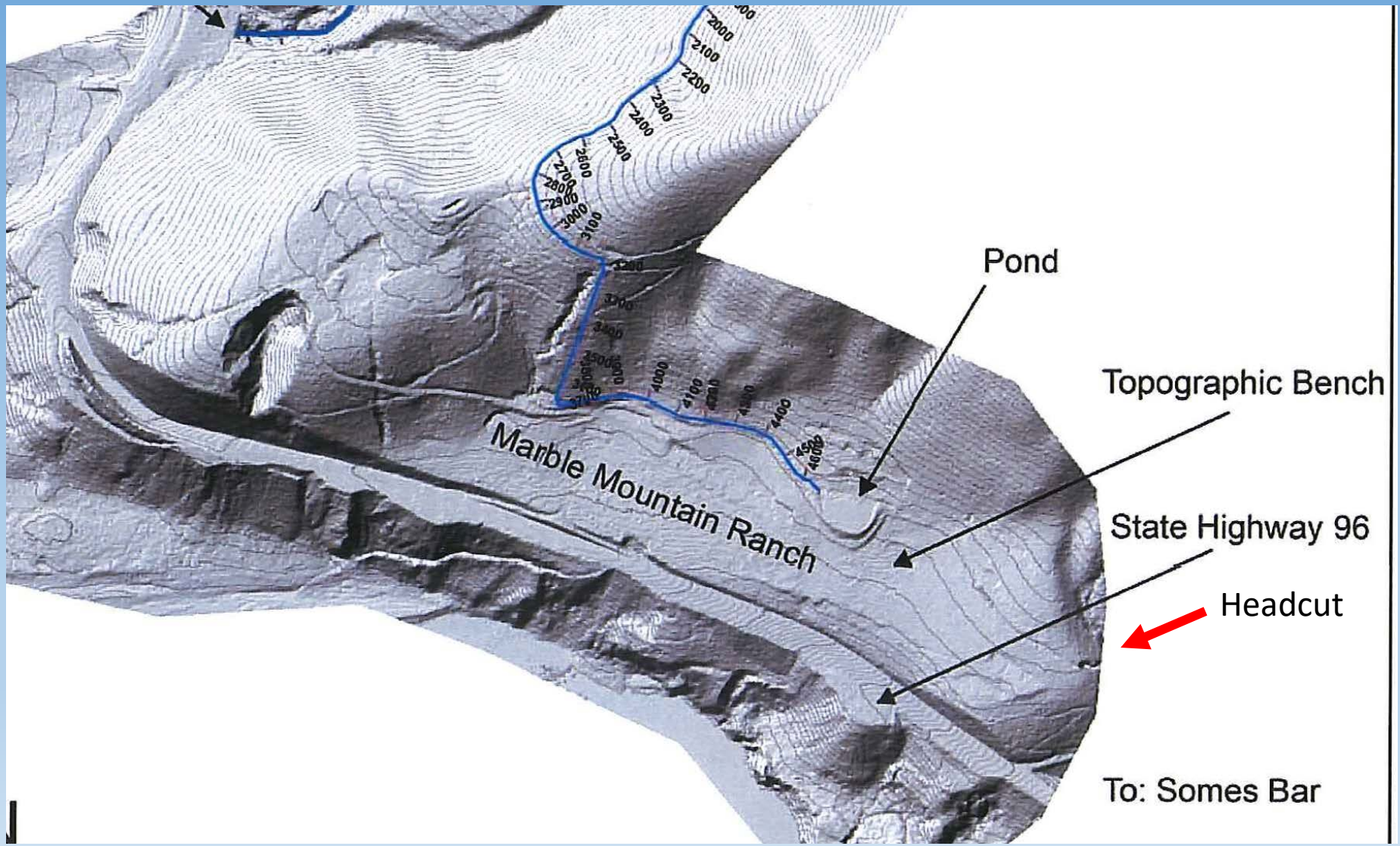
Marble Mountain Diversion
Stream Flows Under Diversion

Marble Mountain Diversion
Cut Bank Slumps

Marble Mountain Diversion
Seepage and Cumulative Capacity Loss

Marble Mountain Diversion Sediment Trap- tank car

Lidar Imagery of the lower Diversion works



Marble Mountain Diversion
Irving Creek Outfall

Tributary to Irving Creek

Regional Water Board Enforcement Actions

- December 3, 2015,
  - Notice of Violation to the Discharger,
  - draft cleanup and abatement order (CAO)
  - inspection report

- Discharger failed to demonstrate an ability to follow through on commitments and produce required or agreed to work products.

- August 4, 2016,
  - RWB issued final cleanup and abatement order (Order No. R1-2016-0031)

Order No. R1-2016-0031

Alternatives, Water Code Compliance, Considering Beneficial Uses

The Final CAO Directives Ordered the following:

1. Evaluate/report on the Pelton wheel and alternative methods of diversion1. -Due date 10/15/2016
2. Evaluate, assess, and develop a Restoration and Monitoring Plan (RMP) to restore and stabilize the head cut at Irving Creek outfall- Due date 9/10/2016
3. Evaluate, assess, and develop a plan to mitigate sediment sources and a ditch operation and maintenance plan- Due date 10/15/2016
4. Sediment source assessment of ditch and Stanshaw Creek and sampling plan for ditch surface waters before and after use. Due date 9/10/2016 w/ caveat of addressing discharges discovered
5. Progress Reports due Quarterly starting 10/ 1/ 2016.
6. All work required to be completed by 10/15/2018

1 Directive anticipates potential ditch piping and requires mitigation of slopes to prevent erosion.

Chart of CAO Deliverables with Negotiations

Task	MMR Compliance Plan March 24, 2016 MMR Proposed	Region 1 CAO R1-2016-0031 Issued August 4, 2016	SWRCB Draft Order Requested August 30, 2016	MMR Proposed August 26, 2016	New Proposed MMR Compliance Plan February 8, 2017
Complete water and energy efficiency report	7/1/2016	10/15/2016	10/15/2016	10/29/2016	Will not complete
Submit proposed Restoration Monitoring Plan (RMP)		9/10/2016		3/31/2017	Cancelled
Assess & develop mitigation for Irving Creek outfall		9/10/2016			2/28/2017
Submit water quality sampling plan		9/10/2016		12/1/2016	Complete w/caveat more required under full ditch operations
Implement WQ sampling plan and provide results		11/1/2016			Agrees then requests changes
Stabilize head cut and slope at Irving Ck. outfall	4/15/2016	10/15/2016	10/15/2016		12/31/2017
Submit plan to remedy discharges identified by sampling plan		12/1/2016			May complete if discharges resume
Ditch monitoring and operation plan		10/15/2016		10/15/2016	None Provided
Submit ditch evaluation report (MMR calls O&M plan)		10/15/2016		3/31/2017	3/31/2017

Status of Compliance with Final CAO

- September 6, 2016
  - Discharger filed petition for reconsideration
  - State Water Board took no action
  - No legal challenge filed by the Discharger to the Final CAO.
- Final CAO Compliance:
  - Regional Water Board has issued 3 Notices of Violation for the Discharger's failure to comply with the terms of the CAO.

Notice of Violation No. 3

- Notice of Violation No. 3 summarizes Directives met and outstanding compliance needs and tallies days of violation. (WR-1)
- In Summary the Directives that we consider to have been met (with leniency on the interpretation of met) are as follows:

  Directive 4. a) Ditch Slope Assessment and Mitigation Plan is in part met- The analysis lacks mitigation and restoration planning for areas where previous erosion has occurred.

  and 4. b) Sampling plan for surface waters discharged into and through the Ditch- the Directive is met based upon present use of ditch or lack of use.

  Directive 5- Progress reporting- based upon the correspondence received, we are interpreting this directive to have been met by the Discharger.

Water Quality Control Plan for the North Coast Region (Basin Plan)

- A Regional Water Board tool for implementing the Porter Cologne Water Quality Control Act and federal Clean Water Act.
- Including the following:
  - Temperature Policy
  - Temperature Objective for intrastate waters
    - prohibits any alteration of natural receiving water temperature unless it can be demonstrated that such alteration does not adversely affect beneficial uses.
  - Prohibitions on Point Source and Non Point Source Discharges within certain defined parameters.
  - Klamath Basin Implementation (Action) Plan applies to the affected watersheds.

Basin Plan
Temperature Policy

- The Policy for the Implementation of the Water Quality Objectives for Temperature states the following (emphasis added):
  - "To attain and maintain the water quality objectives for temperature, the Regional Water Board and its staff will implement programs and collaborate with others in such a manner as to prevent, minimize, and mitigate temperature alterations associated with… Activities with the potential to reduce instream flows or reduce sources of cold water, including cold water refugia."

- Regional Water Board shall take various actions to achieve temperature objectives and implement temperature TMDLs, including coordinating with the Division of Water Rights to help ensure that the terms of water right permits and licenses are consistent with the water quality objectives for temperature.

Basin Plan
Klamath River TMDL (Action) Plan

- Thermal Refugia Protection Policy
  - Prescribes enhanced protection for thermal refugia
  - Identifies Stanshaw Creek as one of multiple streams requiring greater protection due to the cold water and presence of fish. (3000’ buffer instead of 500’)
  - Includes a policy directive for State Water Board staff to consider the impact of increased diversions (flows) in tributaries that provide thermal refugia when issuing water right permits for surface water diversions in the Klamath River Basin.
- Prohibits Discharges of waste that violate any narrative or numerical water quality objective not authorized by waste discharge requirements or other order or action by the Regional or State Water Board.

Thermal Refugia Protection Policy
Thermal Refugia Description

- Thermal refugia are typically identified as areas of cool water created by inflowing tributaries, springs, seeps, upwelling hyporheic flow, and/or groundwater in an otherwise warm stream channel offering refuge habitat to cold-water fish and other cold water aquatic species

- Thermal refugia are essential to the support of the cold water fishery because they moderate naturally elevated temperatures in the mainstem Klamath River

Stanshaw Creek Thermal Refugia Attractive and Complex Habitat

Observed Impacts of MMR Diversion
Karuk Tribe and USFS data
July 1, 2009

Analysis of available temperature and diversion data -

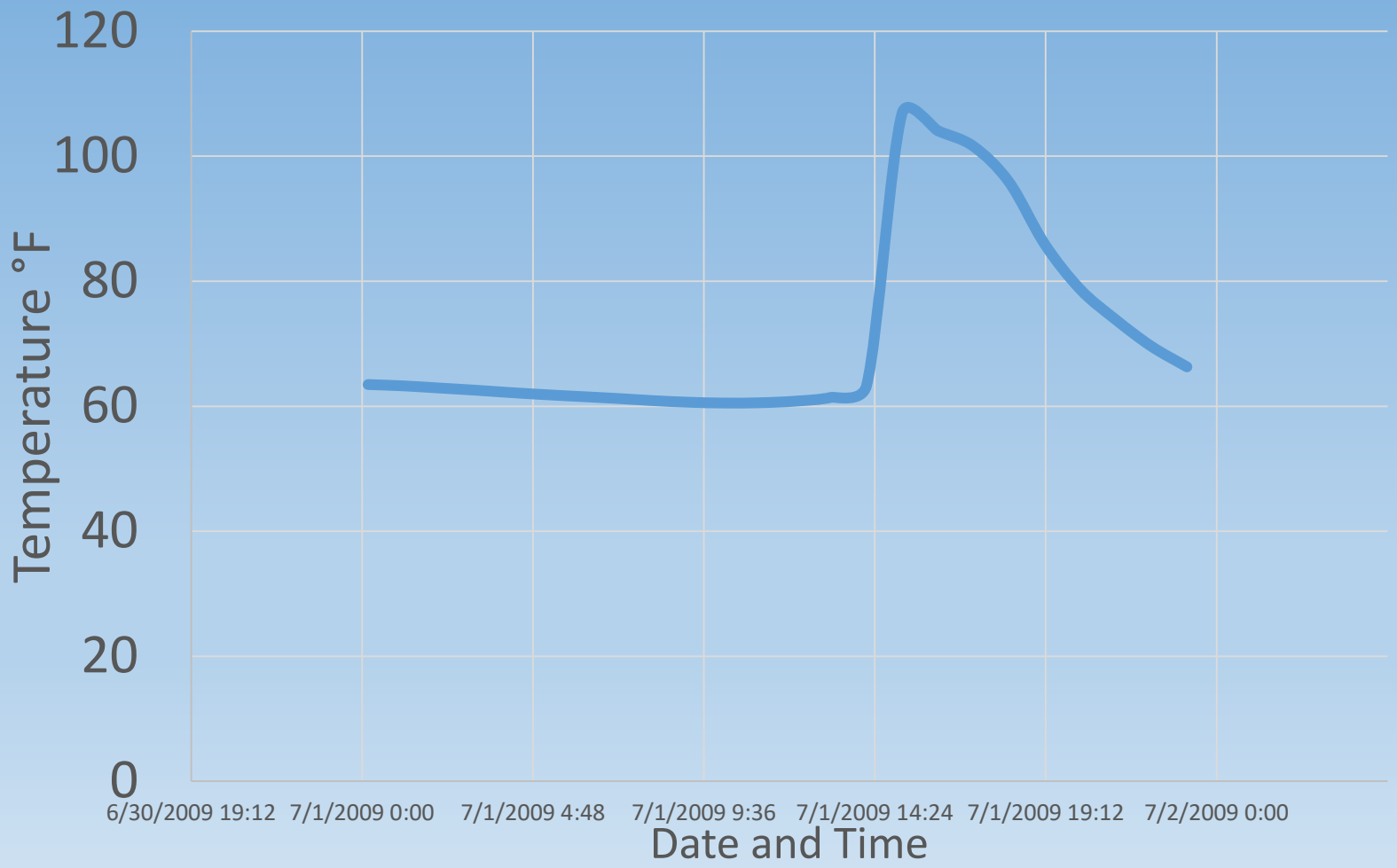
- The key is find a day when I have flow and temperature data to evaluate the diversions potential effects (July 1, 2009)
- Stanshaw Creek flow data
  - .5 cfs below diversion near Hwy 96
- Stanshaw Creek Diversion Ditch at Irving Creek outfall
  - 1.8 cfs in diversion outfall before entering the tributary to Irving Creek
- Water temperature from 1400 hours to 1500 hours in Stanshaw Creek Klamath River confluence pool rises from 63° F to 107° F.
  - Temperature increase declines over approximately 9 hours

Likely cause: dewatering of the Stanshaw Creek confluence pool or the datasonde- either case means habitat was affected

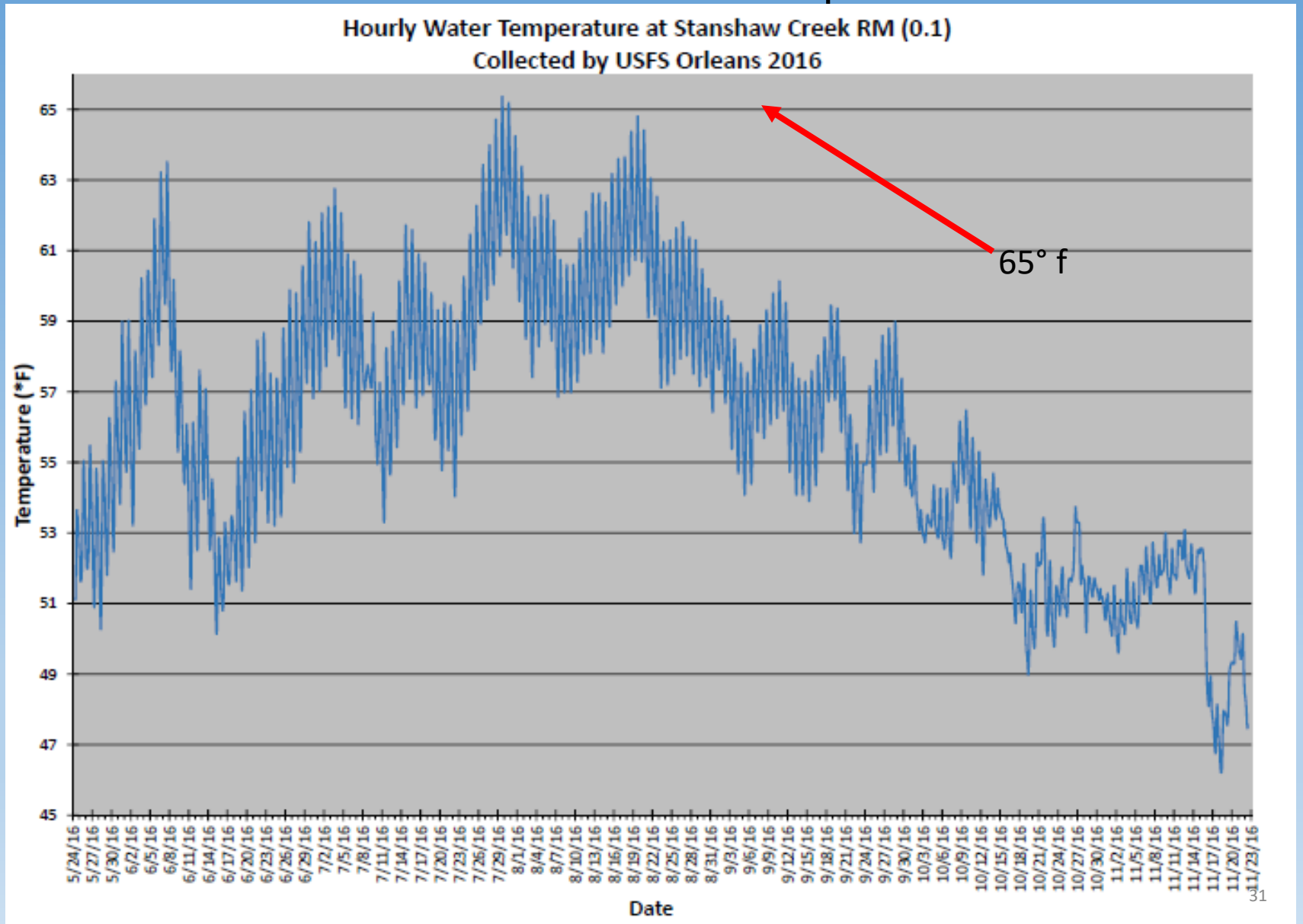
2016 Discharger contends they did not run the diversion for hydropower

2016 Stanshaw Creek refugia pool temperatures did not exceed 65°

Diversions Impacts on Thermal Refugia



2016 Stanshaw Creek Temperature data



Closing Comments

- The Diversion, as operated, represents potential pollutant sources
  - -Hydromodification of a streams natural flows
  - -Sedimentation from operation and maintenance
- The Diversion discharges:
  - Sediment
  - Flow by taking one watersheds product and placing it in another watershed after use.
- Diversion impacts:
  - Temperature in receiving waters
  - Habitat by decreasing cross section (Volume)
- The Diversion appears to represent a threat and a nuisance to beneficial uses through altering cold water refugia.