

Section V Technical Advisory Committee (VTAC) Update

**BOF Monitoring Study Group
Meeting**

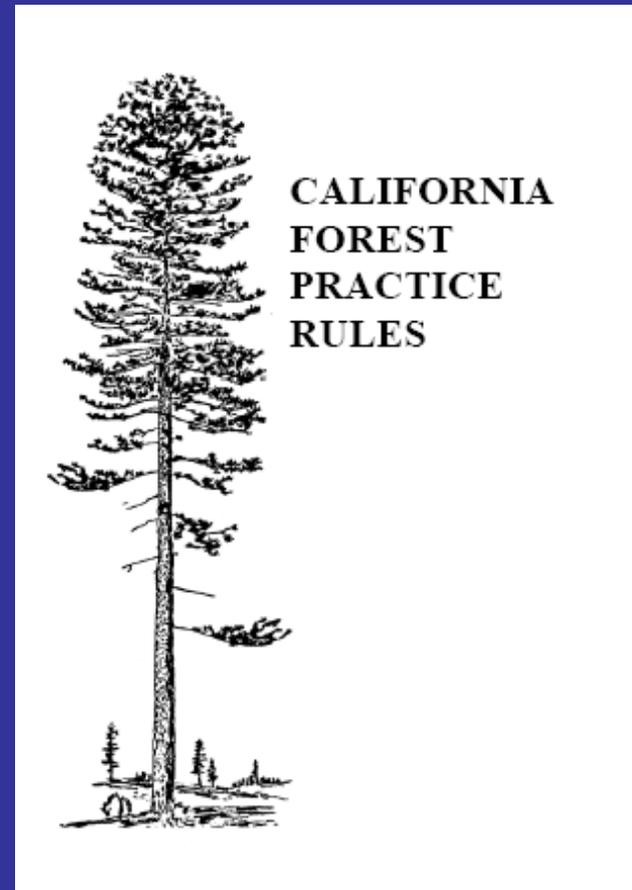
September 19, 2012

Outline

- **Background Information**
- **Primary Types of Potential Riparian Site-Specific Proposals**
- **Draft VTAC Guidance Document**
- **Pilot Projects**
- **Next Steps**

ASP Rule 14 CCR § 916.9(v)

- The 2009 Anadromous Salmonid Protection (ASP) rules provide a moderately high level of protection for Class I, II, and III watercourses.
- In Section V of the ASP rules, the State Board of Forestry and Fire Protection established a regulatory pathway to allow for site-specific riparian design.
- This approach is voluntary.



ASP Rule 916.9(v): Site-Specific Measures or Non-Standard Operations Provisions

- Develop site specific measures in place of any of the ASP requirements.
- RPF is to ensure that the goals and standards for salmonid habitat are met.
- DFG/Review Team agencies concurrence required.
- Rules call for development of 2 pilot projects with agencies and landowners in 18 months.
- Guidance provided for site specific plans for:
 - Flood prone areas.
 - Fire hazard reduction.

ASP Rule 14 CCR § 916.9(v)

- Site Specific riparian practices must be based on scientific principles.
- Active riparian management must be appropriate for a given watershed (basin-scale context) and at the stream reach scale.

Does the proposed practice make sense from geomorphic, biologic, and hydrologic perspectives?

ASP Rule 14 CCR § 916.9(v)

- Two pathways for site-specific riparian management.
 - DFG written approval for a site-specific practice.
 - Detailed analysis including the items listed in Section V (complete analysis)—can be used at the watershed scale.

Incentives to Use 14 CCR § 916.9(v)

- Landowners will have increased flexibility to manage riparian zones based on site-based needs (vs. a fixed, prescriptive standard).

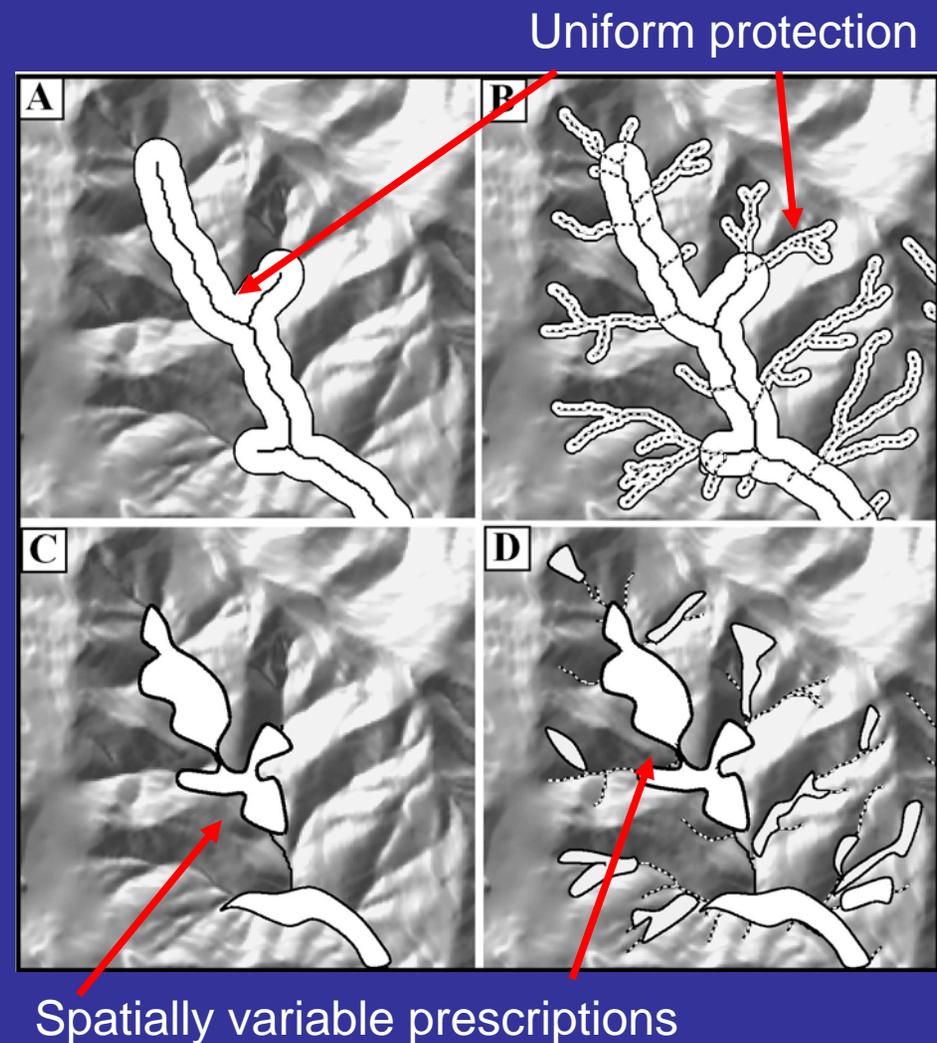


Image: L. Benda, Lee Benda and Associates

VTAC Established to...

- **Develop a general guideline document that will allow for broad application of the site-specific approach for riparian management under 916.9(v).**
 - **For example, this could be an alternative to “uniform buffer strips.”**
- **Help develop and implement at least 2 pilot projects to demonstrate site-specific riparian management.**

VTAC Members and Representatives

• Members

- Mike Liquori, SWC (Chair)
- Peter Ribar, CTM
- Dr. Kevin Boston, OSU
- Dr. Matt O'Connor, OEI
- Dr. Kate Sullivan, HRC (through 2011, now US EPA)
- Dave Hope, Consultant
- Mark Lancaster, 5C
- Richard Gienger, public

• Agency Representatives

- Bill Short, CGS
- Bill Stevens, NMFS
- Bryan McFadin, NCRWQCB
- Drew Coe, CVRWQCB
- Stacy Stanish, Kevin Shaffer, Dr. Stephen Swales, DFG
- Pete Cafferata, CAL FIRE

• CAL FIRE/BOF Assistance

- Crawford Tuttle (through 2011)
- Bill Snyder
- Duane Shintaku
- Dennis Hall
- George Gentry

VTAC Timeline

- VTAC established October 2010.
 - VTAC has met 14 times between October 2010 and September 2012.
- Present the final guidance document to BOF by the end of 2012.
- Establish pilot projects prior to the end of 2012.

**Soquel Demonstration
State Forest
Field Meeting held on
June 21, 2011**



**VTAC Meeting
West Weaver Creek located
near Weaverville
June 25, 2012**



Primary Types of Potential Riparian Proposals

- Placement of large wood in fish-bearing watercourses using large conifers from the Core and/or Inner Zones.
- Thinning trees in the Core and Inner Zones to accelerate conifer growth.
- Management in the Core, Inner and Outer Zones of Class I watercourses to reduce the chance of catastrophic wildfire through the use of fuel hazard reduction projects.
- Modifying the stand composition of the Core and Inner Zone to restore conifer deficient areas or develop a more appropriate mixture of conifers and hardwood species.
- Sediment Reduction within Riparian Zones

**East Branch of Soquel Creek
Riparian Trees Excavated along the
Streambank August 2012**



**East Branch of Soquel Creek
Riparian Trees Excavated
along the Streambank
August 2012**





Soquel Demonstration State Forest

Fern Gulch Timber Sale



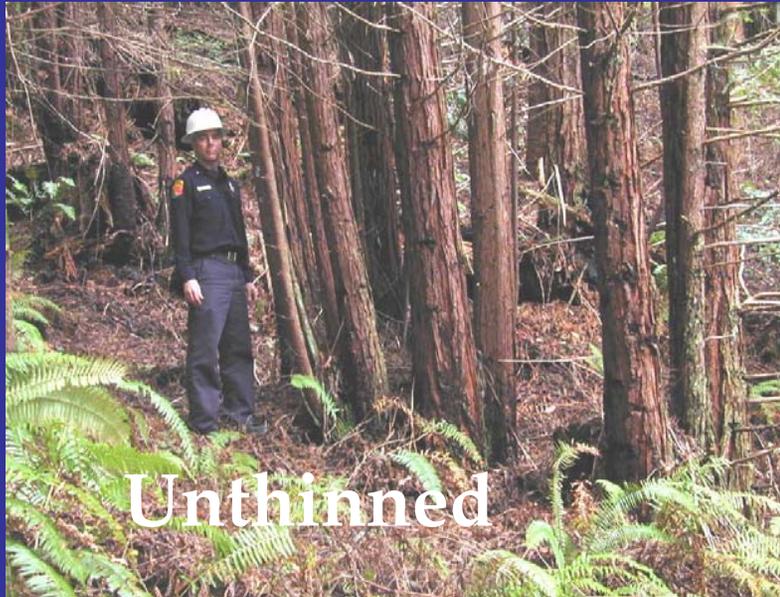


**Example of
Beneficial
Riparian
Zone
Thinning to
Accelerate
Stand
Growth**

Photo: Dr. Kevin
O'Hara, UCB

Humboldt Redwood Company's Plantation at Scotia

Thinning Affects Wood Recruitment - Caspar Cutting Trials, JDSF



Fire History of Coniferous Riparian Forests in the Sierra Nevada

Van de Water and North 2011

- **Current riparian forests more prone to high-intensity fire than current upland forests.**
- **Riparian forests are significantly more fire prone under current management regimes with excluded harvest that allow for a build-up of fuels.**



Photo: Kip Van de Water,
UC Davis

**Interior Stand with
High Riparian Fuel
Loading and
Elevated Risk of
Catastrophic
Wildfire**

Photo: Kip Van de
Water, USFS



**2012 Ponderosa Fire
Battle Creek**

Photo:
Mark Lathrop, SPI



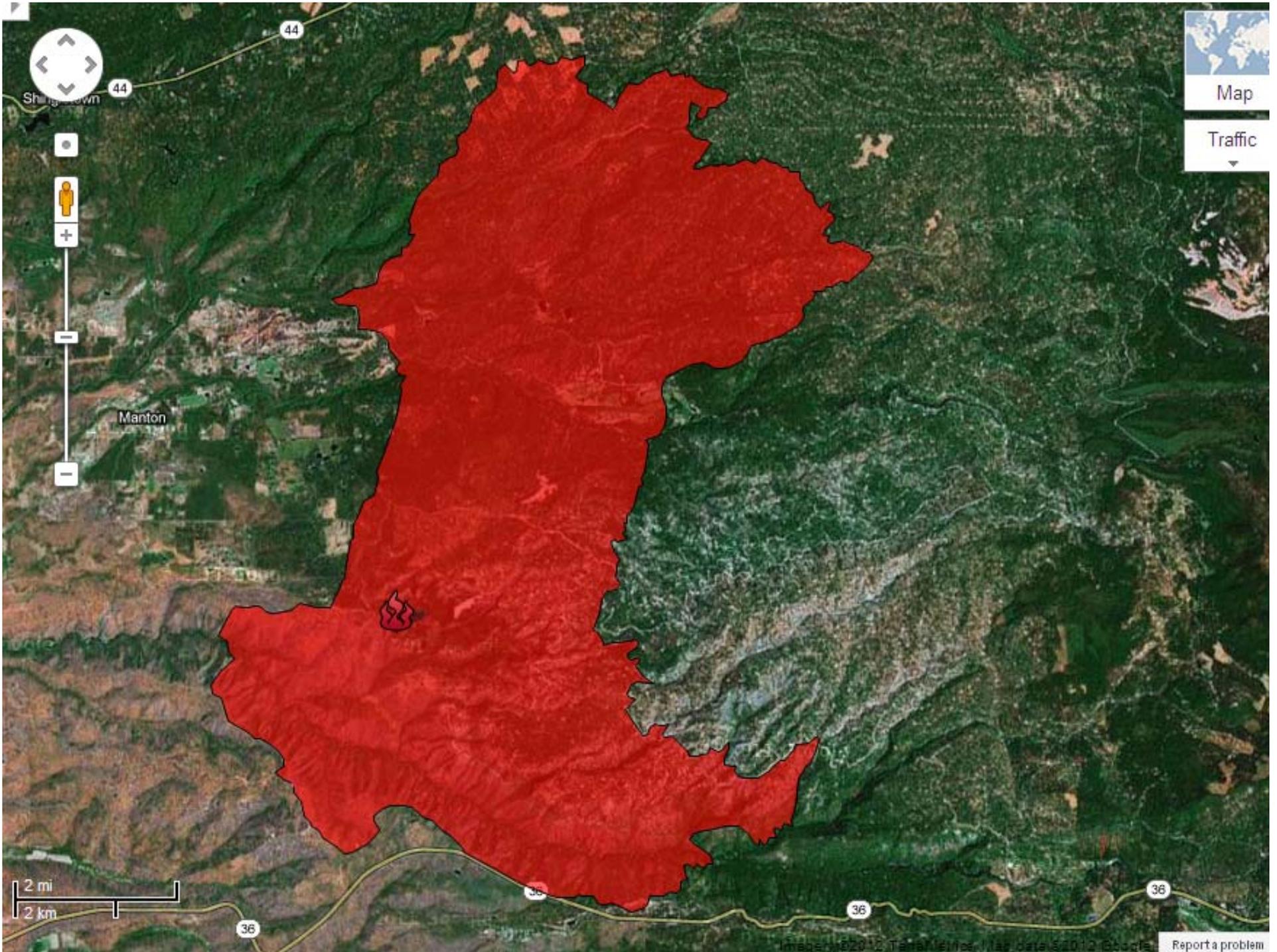


**Unnamed tributary of
Digger Creek, Ponderosa
Fire 2012**

**Photo: Stacy Stanish,
DFG**



**Photo: Adam
Deem, CAL FIRE**



Map

Traffic



2 mi
2 km

Manton

44

44

36

36

36

36

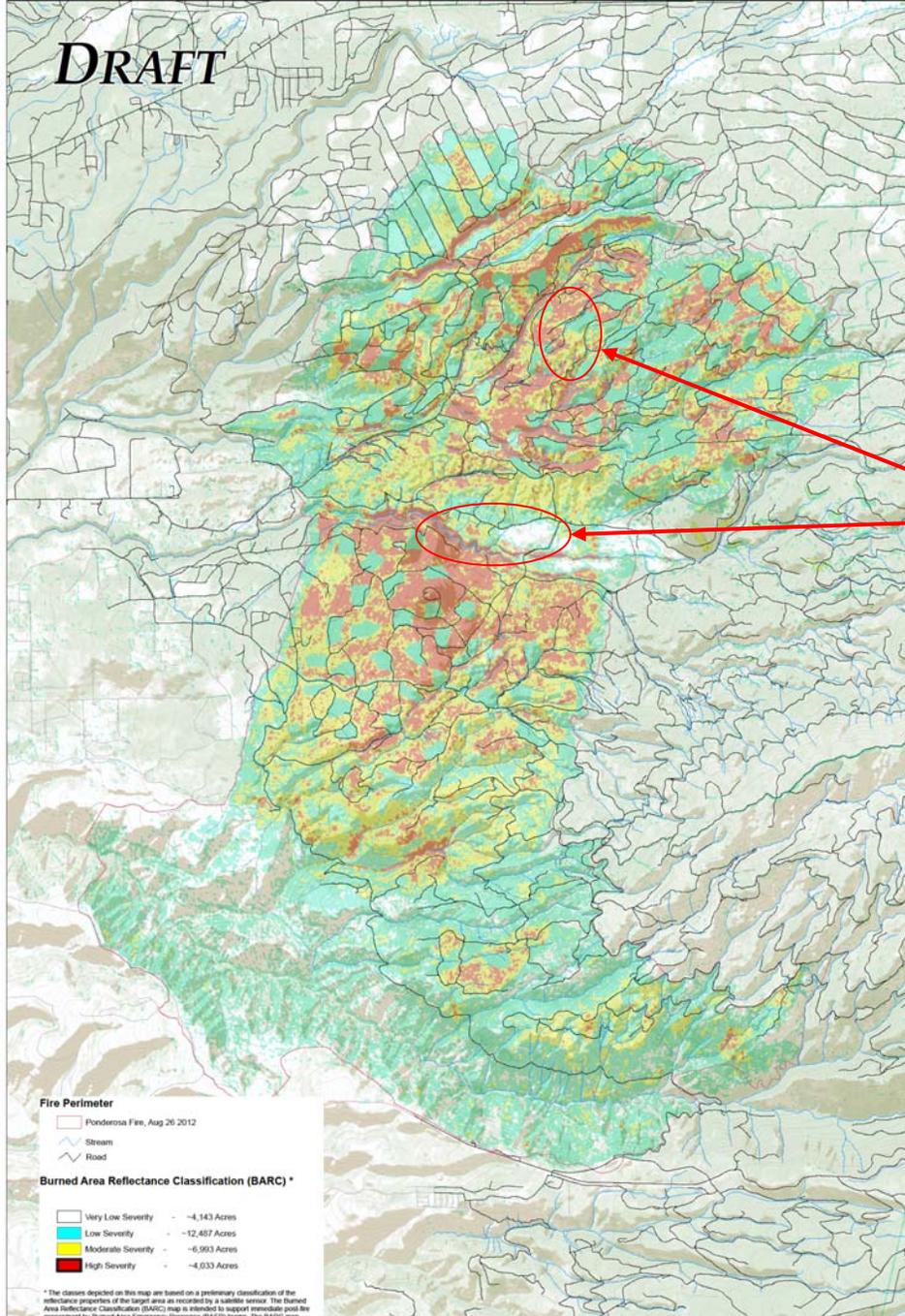
Imagery ©2012 TerraMetrics, Map data ©2012 Google

Report a problem



PONDEROSA FIRE - BARC, AUGUST 26, 2012

DRAFT



**Areas of
Intense
Riparian
Burning**

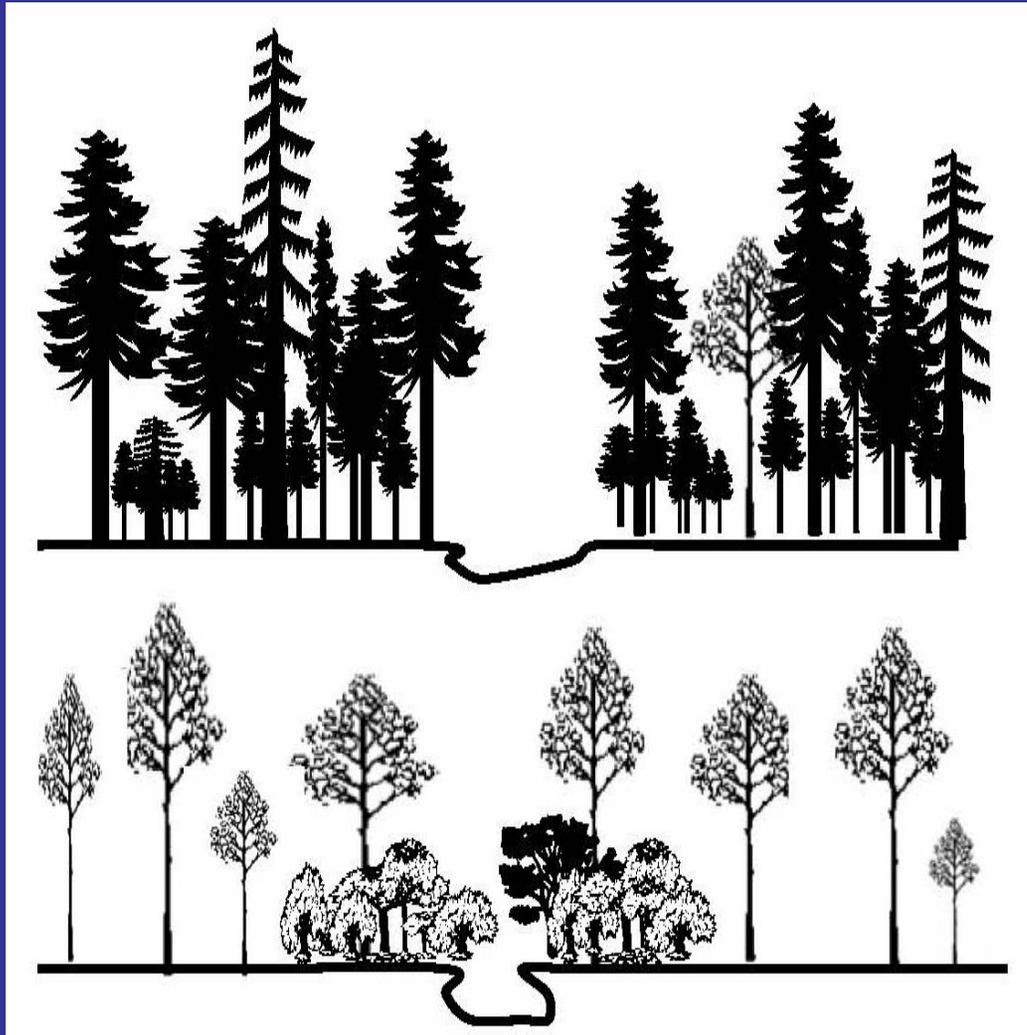


“Dense stands of trees in the Angora SEZ likely contributed to the rapid [fire] spread upslope to Angora Ridge...”

Murphy et al. 2007

**2007 Angora Fire
Lake Tahoe Basin**

Modifying Riparian Stand Composition



Does the Riparian Stand have the optimal mix of conifers and hardwoods for large wood, shading, and nutrient input into the stream system?

Image: Liquori and Jackson 2001

McGarvey Creek, Humboldt County



South Fork Caspar Creek Watershed

Riparian Road
Decommissioning in
1998



DRAFT

Site Specific Riparian Zone Management:

Section V Guidance Document



Anadromous Salmonid Protection Rule Section V

Technical Advisory Committee (VTAC)

September 2012

Sacramento, California

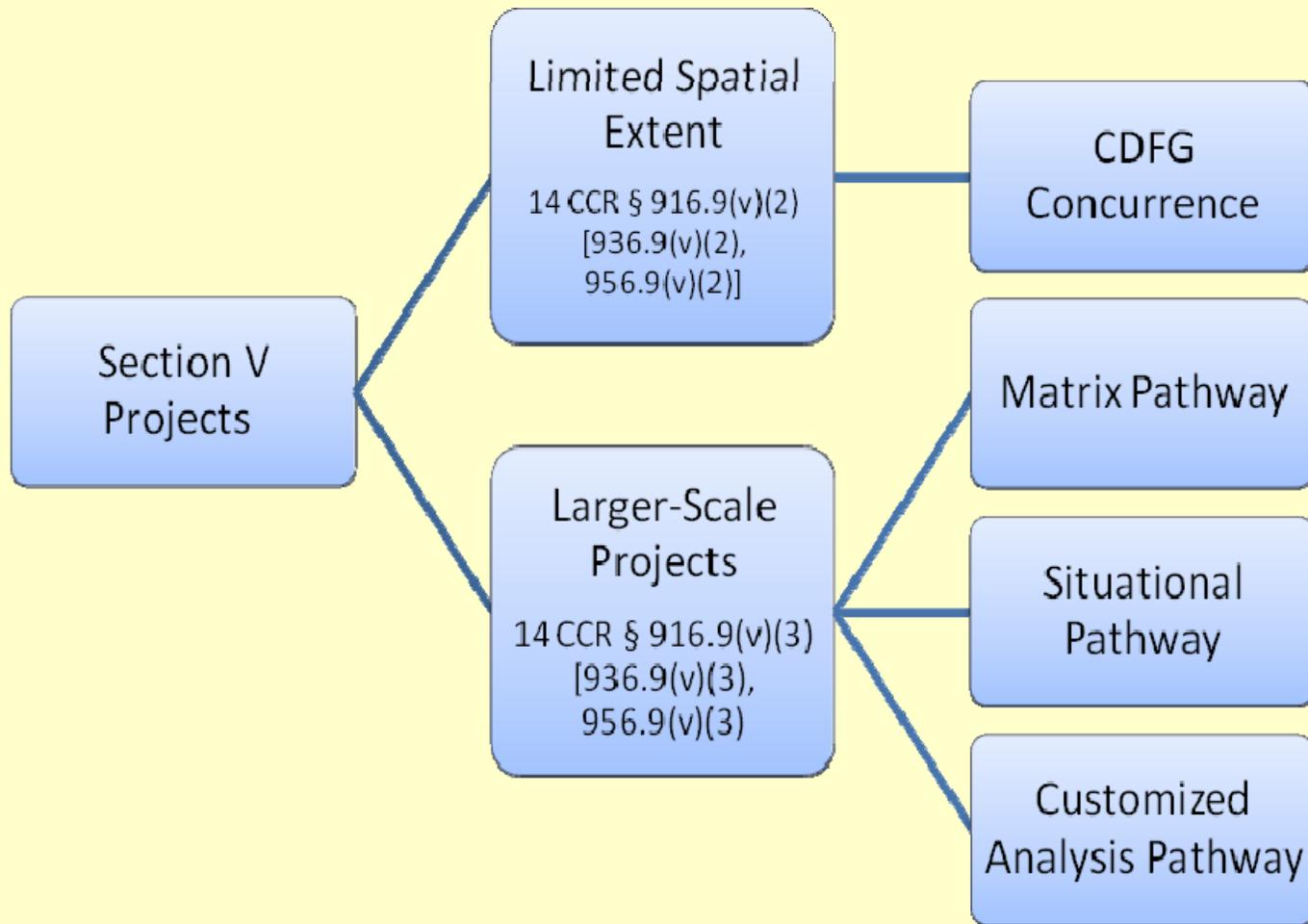


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VTAC Guidance Document Outline

- Pre-Consultation Guidelines
- Introduction/Goals/Conceptual Framework.
- Introduction to Analytical Pathways
- Analytical Pathways
 - Standardized Rule Matrix
 - Situational Scenarios
 - Analytical Design Process
- Submission Requirements
- Proposal Processing
- Monitoring Strategies
- Appendices

Section V Pathways Available to RPFs



VTAC Pre-Consultation Guidelines

- **Voluntary.**
- **Will not receive formal agency approval.**
- **Quickly identify issues of potential controversy.**
- **Give the landowner and/or RPF the ability to determine the potential success of a proposed Section V project.**



VTAC Guidance Document Analytical Methods

- 3 main analytical approaches to satisfy 916.9(v)(3):
 - Use a set of **matrices** to evaluate site conditions, identify objectives, and develop site prescriptions.
 - Use **“situation examples”** to identify where actions can be applied (providing examples with photographs and diagrams).
 - Use **watershed analysis** by expert users.

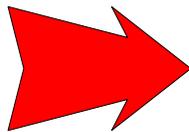
Standardized Rule Matrix Approach

Riparian
Classification

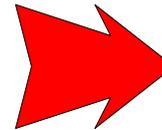


Segment Objectives

Geomorphic
Classification

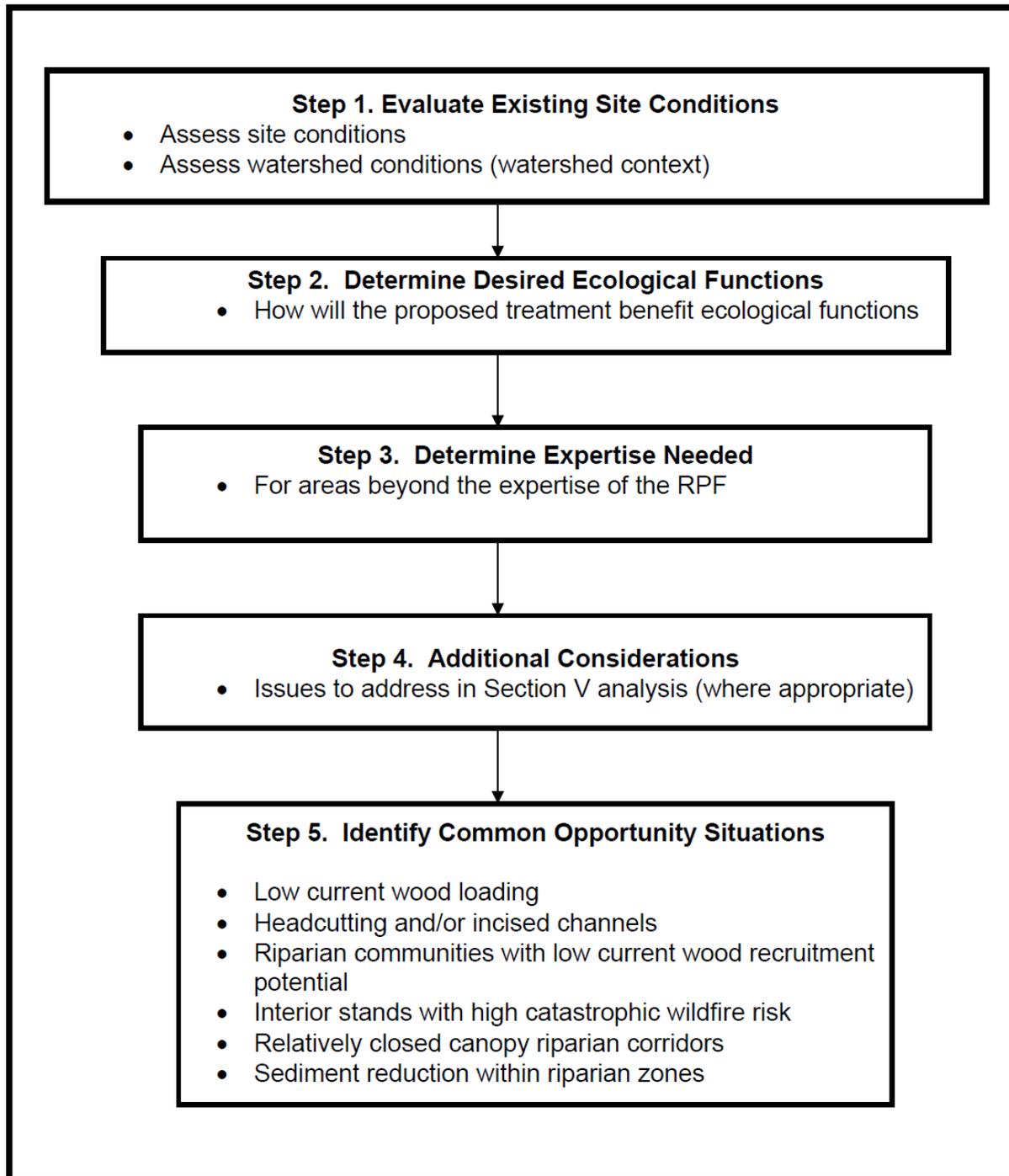


		Site Condition		
		Good	Fair	Poor
Functional Priority	High	Protect	Maintain	Improve
	Mod.	Maintain	Improve	Improve
	Low	Generally Available	Generally Available	Maintain



Rule Matrix

Segment Objectives				
	Wood	Temperature	Nutrients	Erosion
Protect	Maximize retention of recruitable wood	Maximize retention of vegetation that blocks incoming solar radiation	Maximize retention of existing high nutrient vegetation	Prevent and avoid ground disturbances that may disturb banks and/or concentrate runoff
Maintain	Minimize removal of recruitable wood	Minimize reduction in shade	Minimize reduction in nutrient supply	Minimize ground disturbances that may disturb banks and/or concentrate runoff
Improve	Carefully identify individual tree selection that encourage desired silvicultural responses	Carefully identify individual tree selection that minimizes reduction in shade	Encourage treatments that promote balanced primary production and establishment of high nutrient species	Consider treatments that support recovery of eroding lands (e.g. planting, biotechnical stabilization, etc)
Generally Available	Treatment constraints for this function are minimized	Treatment constraints for this function are minimized	Treatment constraints for this function are minimized	Treatment constraints for this function are minimized



5 Steps for Pathway 2, Situational Scenarios

VTAC Guidance Document

Watershed Context Assessment

- **Use existing documents where possible:**
 - TMDL assessments.
 - Anadromous salmonid recovery plans.
 - Private timberland company HCPs.
 - North Coast Watershed Assessment Program (NCWAP) reports.
 - KRIS watershed online sites.
 - RCD watershed assessments.
 - Individual watershed studies (e.g., RNSP).

Monitoring Strategies

- Project Scale Proposals
 - Photo point monitoring
- Larger Scale Proposals
 - Photo point monitoring
 - Short-term (rapid-response) effectiveness monitoring
 - Specific monitoring protocols suited to proposal
 - DFG habitat typing
 - Pool depth
 - Movement of tagged wood

Pilot Projects

- Green Diamond Resource Company
- ~~Collins Pine Company~~

Green Diamond Resource Company Project

- **Project under development by Dr. Lowell Diller.**
- **Aquatic HCP—calls for adaptive management. HCP provides incidental take permit.**
- **Investigation on how to best manage WLPZ/ riparian areas.**
- **Question: Are dense (95%) canopy closure conifer stands in riparian areas ideal for fish growth?**
- **Building on work Dr. Peggy Wilzbach did in 2005 showing added light had a large effect on fish parameters.**

Wilzbach et al. 2005

Effects of riparian canopy opening and salmon carcass addition on the abundance and growth of resident salmonids

Margaret A. Wilzbach, Bret C. Harvey, Jason L. White, and Rodney J. Nakamoto

Can. J. Fish. Aquat. Sci. 62: 58–67 (2005)

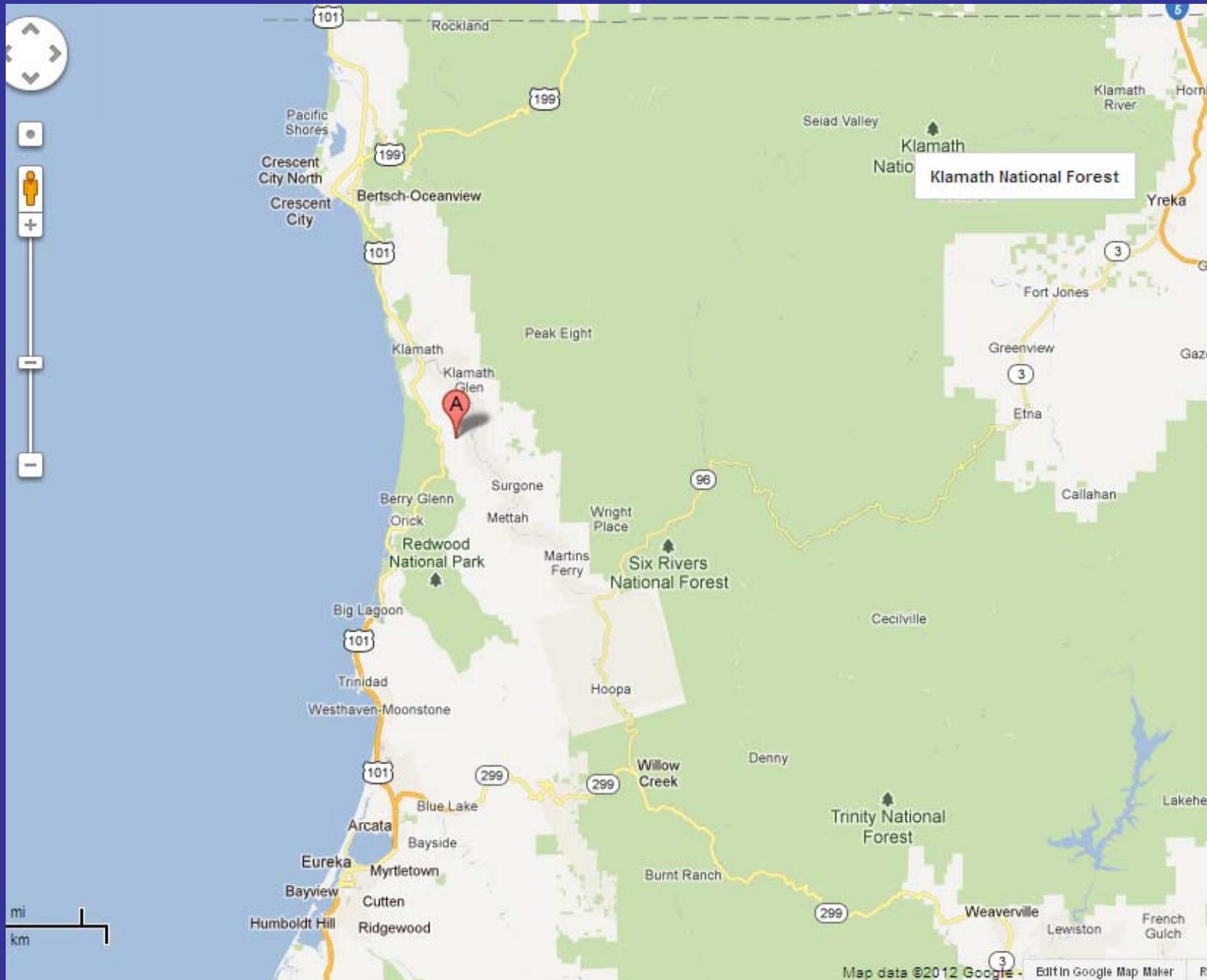
“In light-limited settings where temperature gains associated with canopy opening are not problematic for aquatic resources, gains in salmonid production might be achieved by selective trimming of riparian hardwoods.”

Green Diamond Resource Company Project

- **Project designed for watershed scale—not reach scale (replicate of 2005 study at watershed scale).**
- **Scientists involved: Drs. Lowell Diller, Gordie Reeves, Lee Benda, Ken Cummins, Peggy Wilzbach.**
- **4 sub-basins that drain into the Klamath River (5,000 to 8,000 ac drainage area).**
- **4 sub-basins of the lower Klamath River (5,000 to 8,000 ac drainage area) (Tarup Creek, Mainstem Ah Pah Creek, South Fork Ah Pah Creek and Little Surpur Creek).**

Green Diamond Resource Company Project

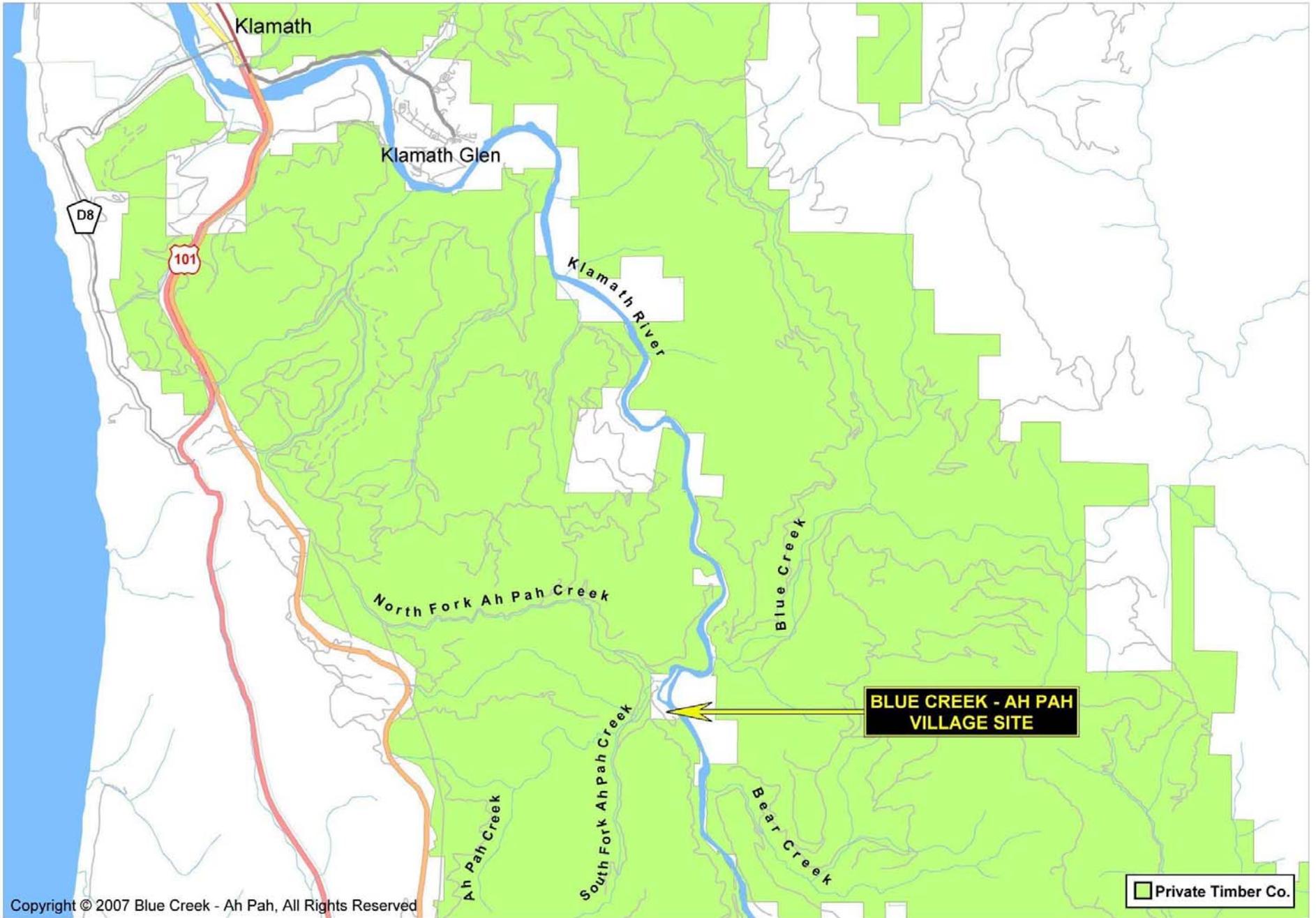
- **1st year—complete at reach scale to work out details of the study.**
- **Obtain pre-treatment data from other sub-basins (several years).**
- **Treat entire sub-basin—response variables are fish and invertebrates.**
- **Old conventional wisdom: “Red alder stands in riparian areas are bad”; new conventional wisdom—alders are good for providing food for fish.**
- **Create openings in riparian stand for light and alder growth.**

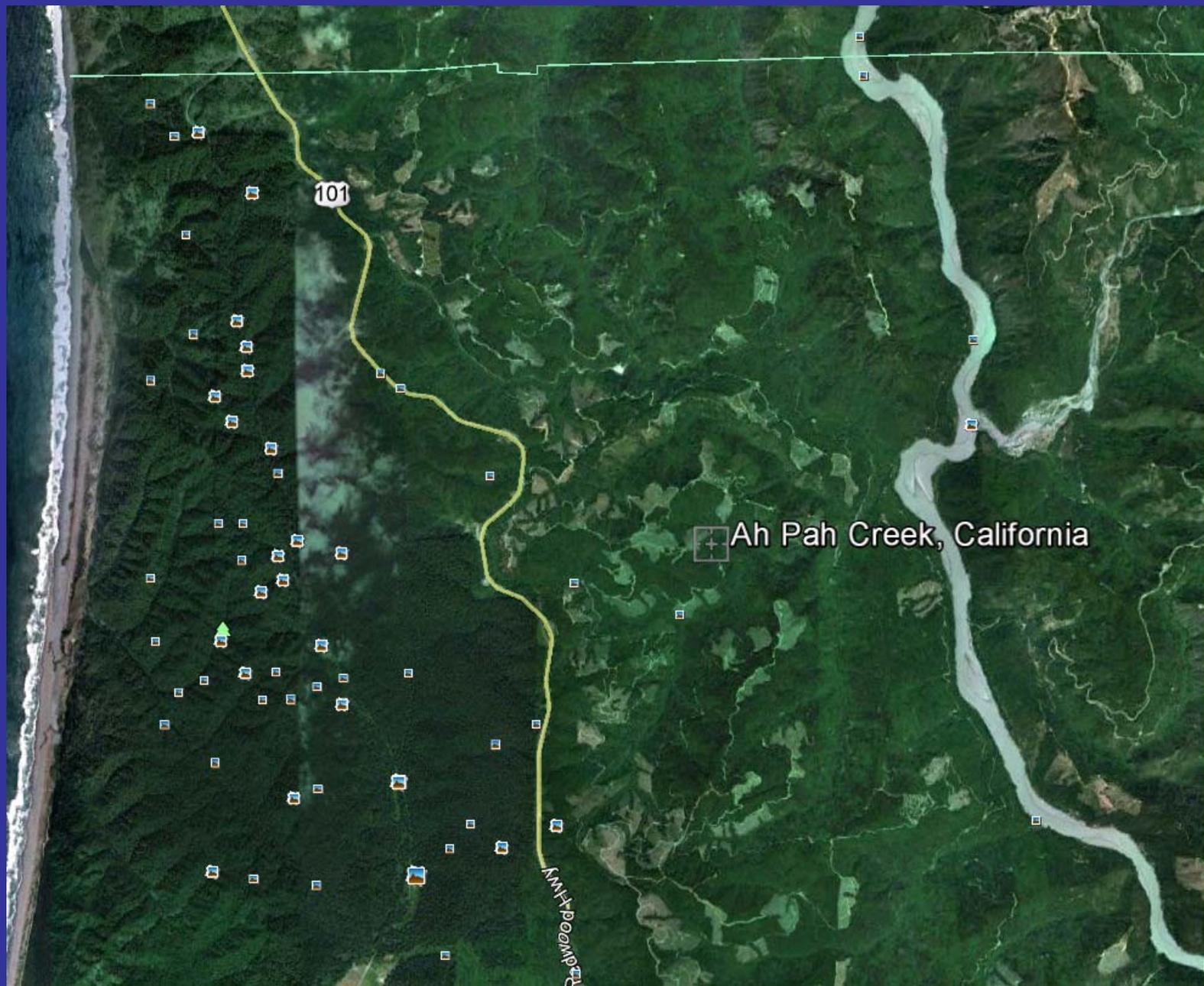


Klamath National Forest

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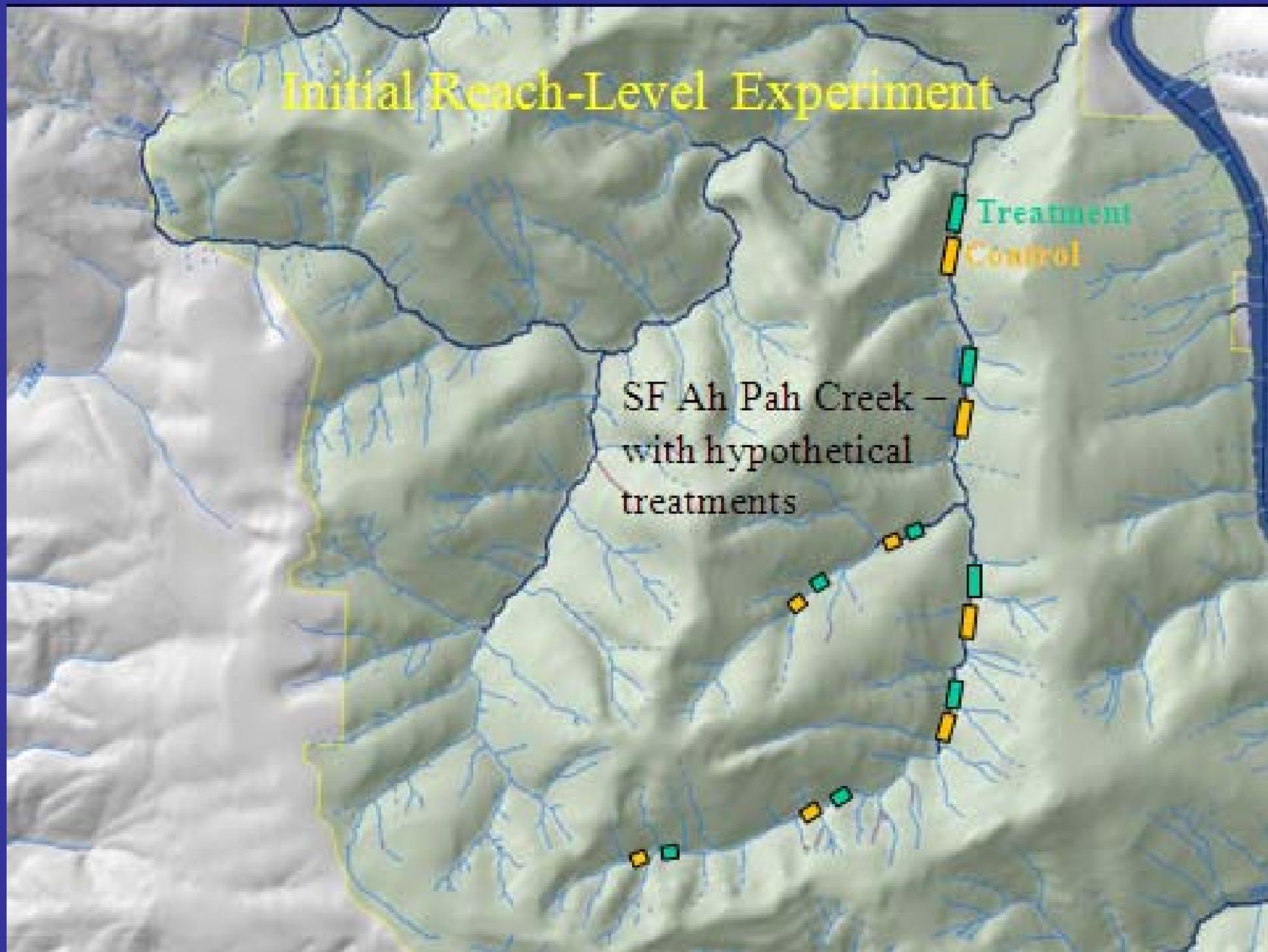
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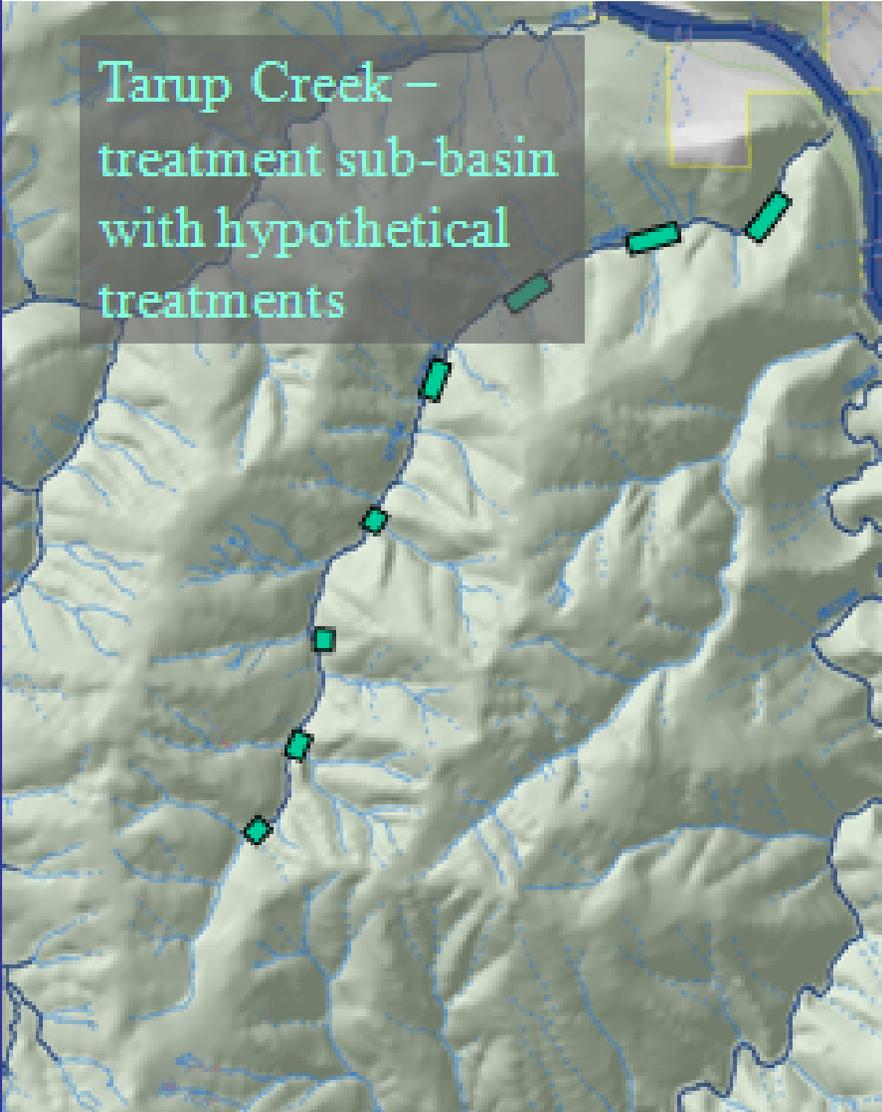


Ah Pah Creek, California

Initial Reach-Level Experiment

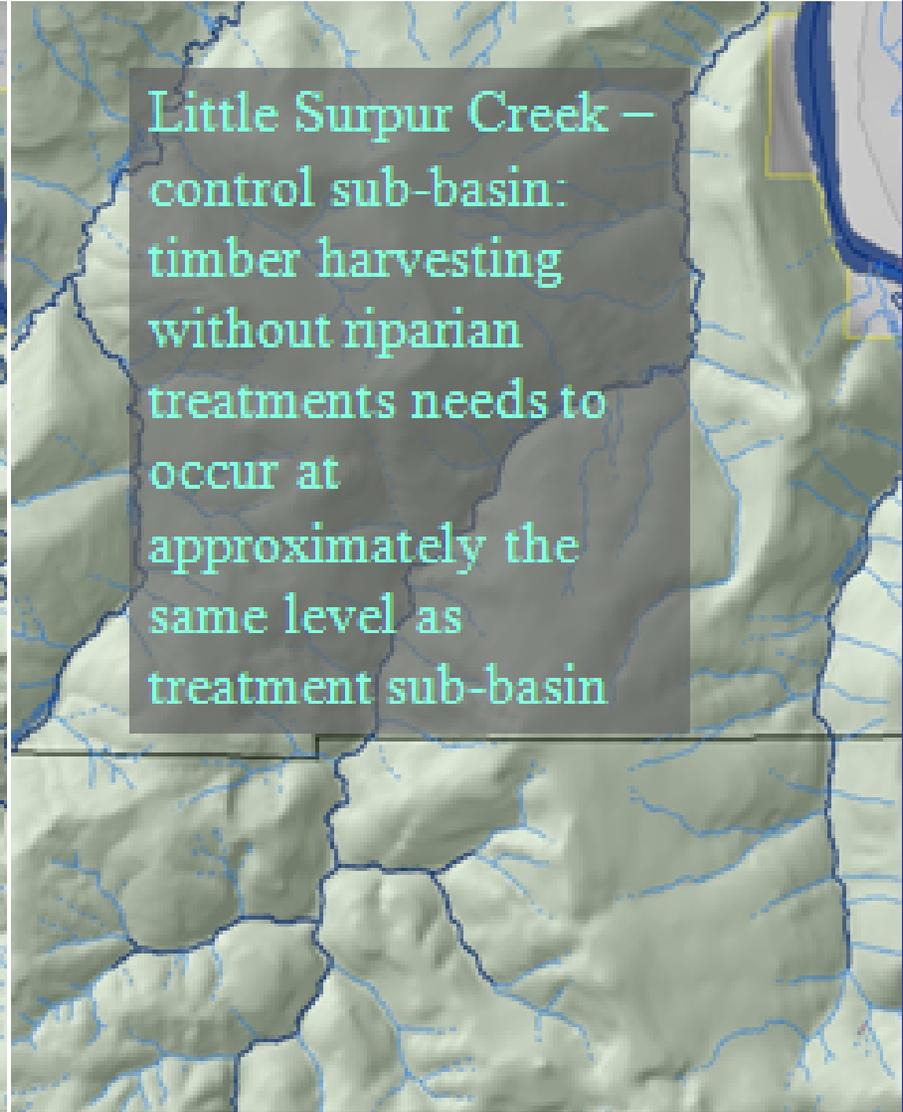


2nd Stage Sub-basin Level Experiment



Tarup Creek –
treatment sub-basin
with hypothetical
treatments

This topographic map shows the Tarup Creek sub-basin. The terrain is shaded in light green and brown, with blue lines representing the stream network. Several red rectangular markers are placed along the main stream channel, indicating the locations of hypothetical treatments. A yellow rectangular box highlights a specific area in the upper right portion of the sub-basin.



Little Surpur Creek –
control sub-basin:
timber harvesting
without riparian
treatments needs to
occur at
approximately the
same level as
treatment sub-basin

This topographic map shows the Little Surpur Creek sub-basin. The terrain is shaded in light green and brown, with blue lines representing the stream network. A yellow rectangular box highlights a specific area in the upper right portion of the sub-basin, corresponding to the location of the yellow box in the Tarup Creek map.

VTAC Next Steps...

- **VTAC to hold conference call on September 21th**
- **Review revised draft Guidance document.**
- **Continue to plan strategies/outreach for one or more additional pilot projects.**