Sound Watershed Consulting

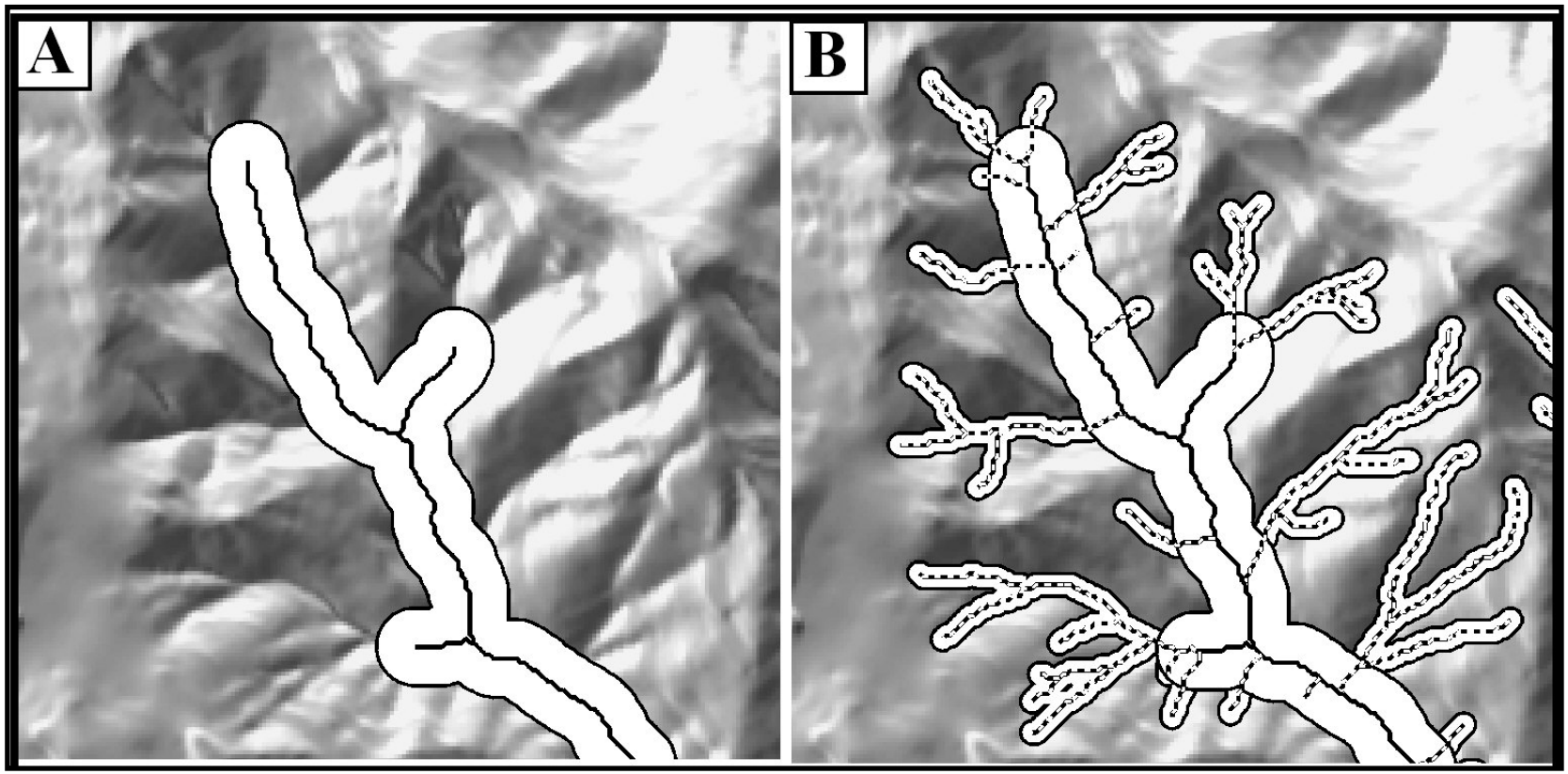
Creating Functional Water Environments

The VTAC Committee: Developing Guidance for an Alterative Regulatory Pathway to the Anadromous Salmonid Protection Rules

Michael Liquori, VTAC Chair

and others…

Introduction



ASP Rule Section V

- The 2009 Anadromous Salmonid Protection (ASP) Rules
- Section V allows for <u>site-specific</u> riparian design
- This approach is voluntary

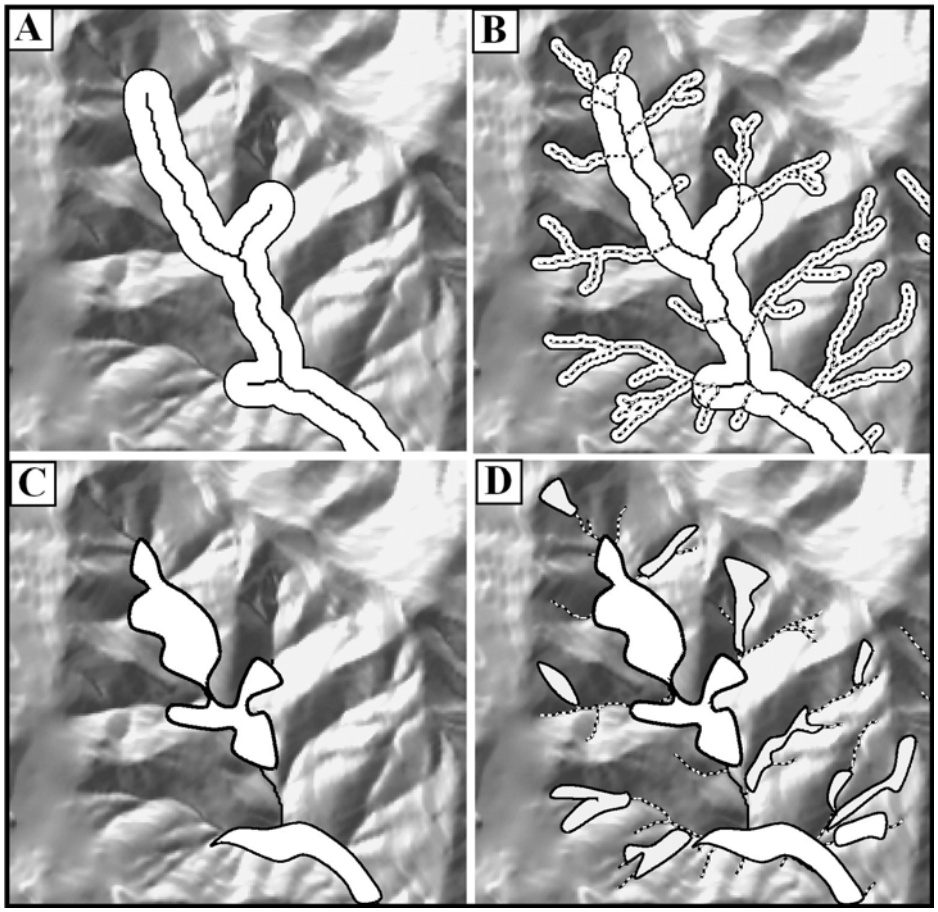
CALIFORNIA
FOREST
PRACTICE
RULES

VTAC Objectives

- To establish principles, guidelines and procedures
- Broaden Incentives
- Establish permitting efficiencies & reduce regulatory uncertainty

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).



VTAC Outreach Survey

1. About You

Thank You for taking the time to help us design CAL FIRE's Aquatic Salmonid Protection (ASP) Rule 916.9 Section V Pilot Program. Your answers will help us meet the needs and desires of a broad array of interests and concerns. We intend that the results of the program will help to promote a faster path to salmonid recovery in the forested lands of California.

There are 4 pages of questions, and this survey should take about 10-15 minutes.

* An asterisk indicates that an answer is required.

*** 1. Are you (or do you represent) a:**

- ○ Large landowner (>50,000 acres)
- ○ Mid-sized landowner (2,500 acres to 50,000 acres)
- ○ Small landowner (<2,500 acres)
- ○ Land manager
- ○ Consultant
- ○ Advocate
- ○ General public
- ○ Agency staff

Other (please specify)

2. Are you a Registered Professional Forester?

- ○ Yes
- ○ No

3. What was your awareness of the ASP Section V rule before this survey?

○ Detailed Knowledge ○ Moderate Awareness ○ Slight Awareness ○ Never Heard of It

*** 4. Prior to watching the video, how was your knowledge of the Section V rule obtained? (Check all that apply)**

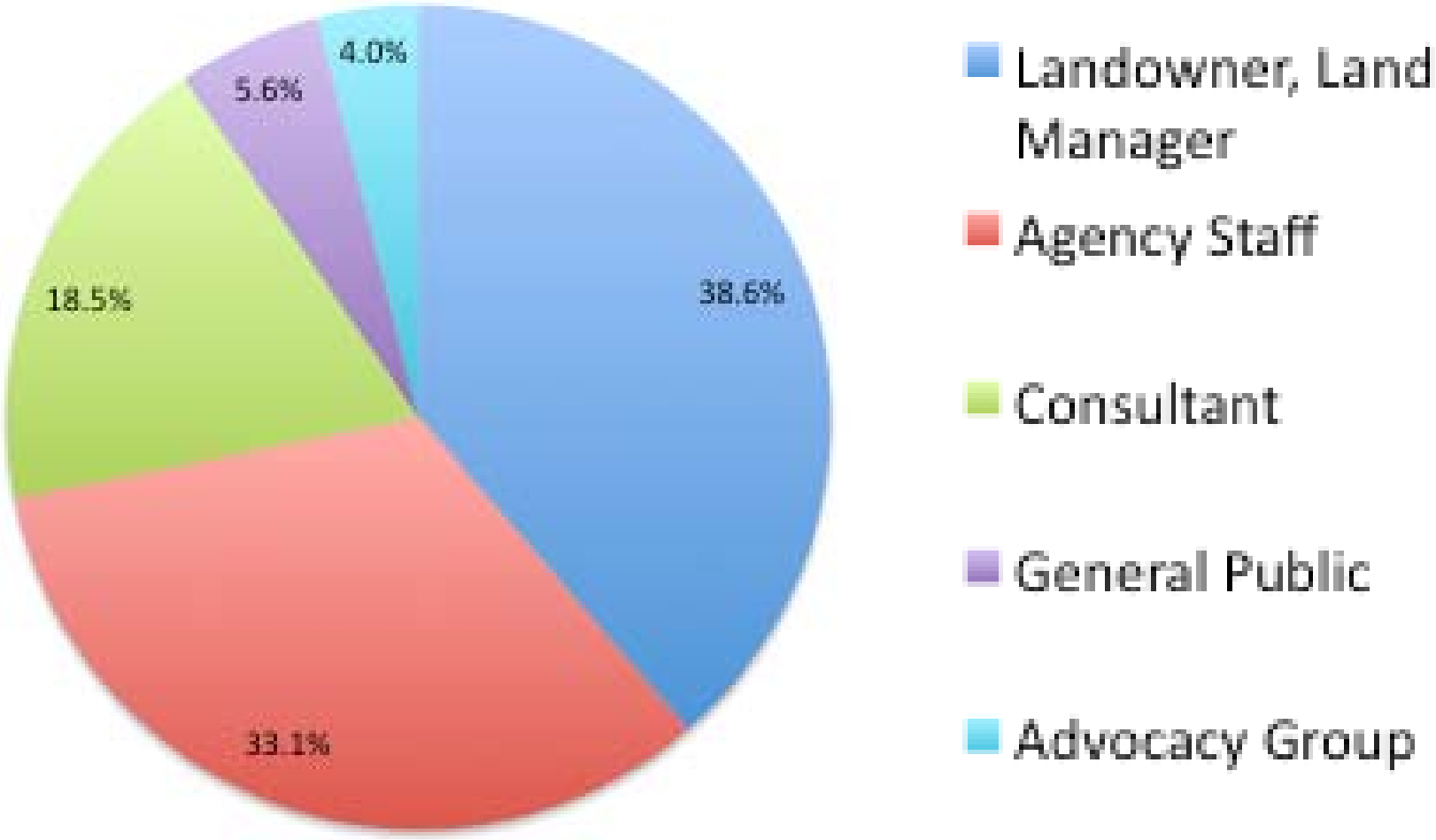
- ☐ Reading the Forest Practice Rules
- ☐ Professional organization information (CLFA, etc.)
- ☐ Internal training/discussions
- ☐ Agency training sessions and/or documents
- ☐ I had no prior knowledge

Other (please specify)

2. Which of the following objectives related to site-based riparian (streamside) management do you support?

	Strong Support	Moderate Support	Low Support	No Support	Neutral
Protecting/enhancing environmental conditions	○	○	○	○	○
Developing the science/technology for responsible, site-specific riparian treatments	○	○	○	○	○
Reducing fire risks	○	○	○	○	○
Demonstrating the ECOLOGICAL benefits of more active forestry within WLPZs	○	○	○	○	○
Demonstrating the ECONOMIC benefits of more active forestry within WLPZs	○	○	○	○	○
Preventing misuse of the rules by RPFs/landowners	○	○	○	○	○
Preventing application of Section V rules by ALL landowners	○	○	○	○	○
Promoting better land stewardship thru active management	○	○	○	○	○
Improving the LONG-TERM ecological function of WLPZs/watercourses	○	○	○	○	○
Improving the SHORT-TERM ecological function of WLPZs/watercourses	○	○	○	○	○
I want to promote the concept that more intensive management can yield more value both economically and environmentally	○	○	○	○	○
Creating the flexibility to address long-term stand management issues	○	○	○	○	○

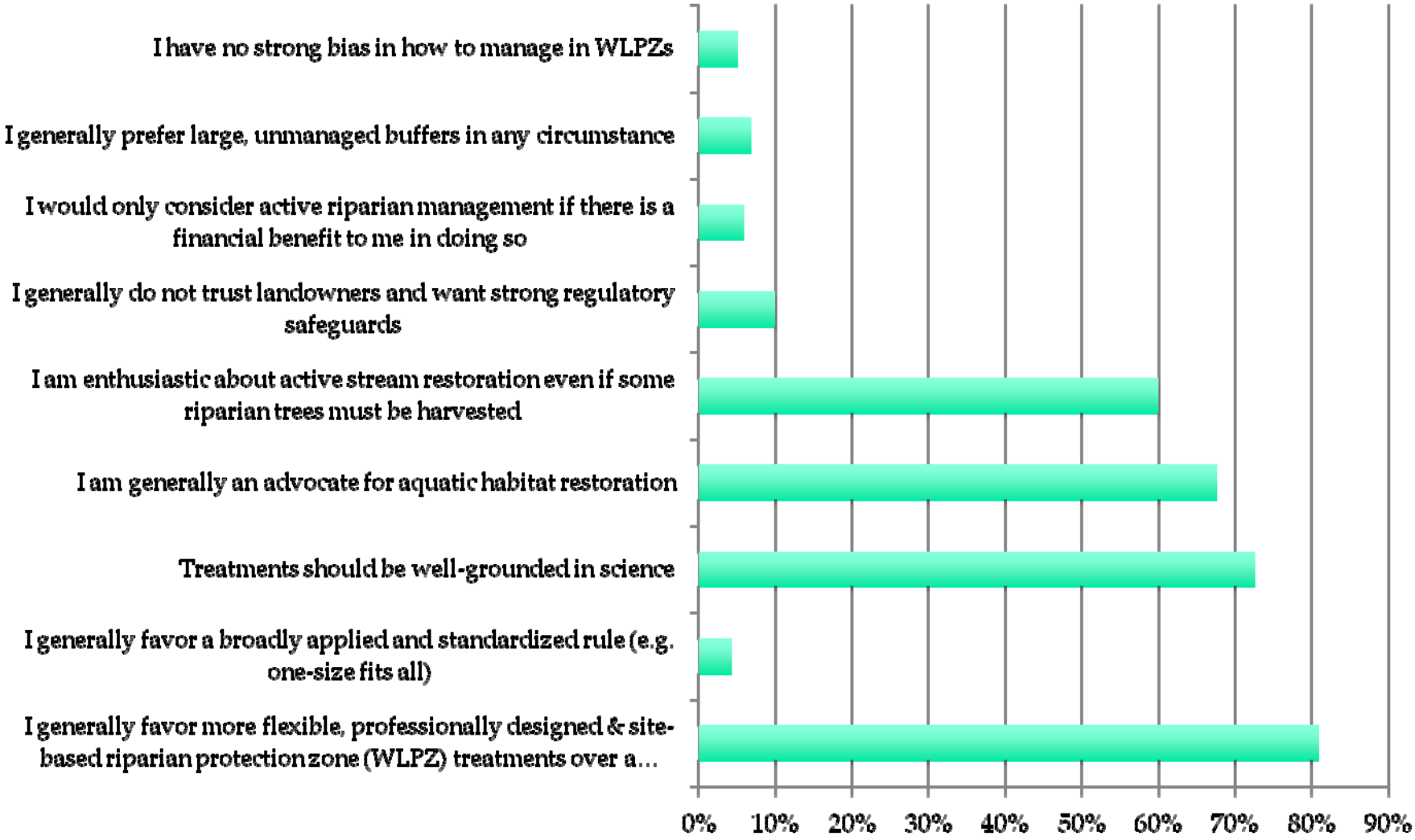
VTAC Survey Responses



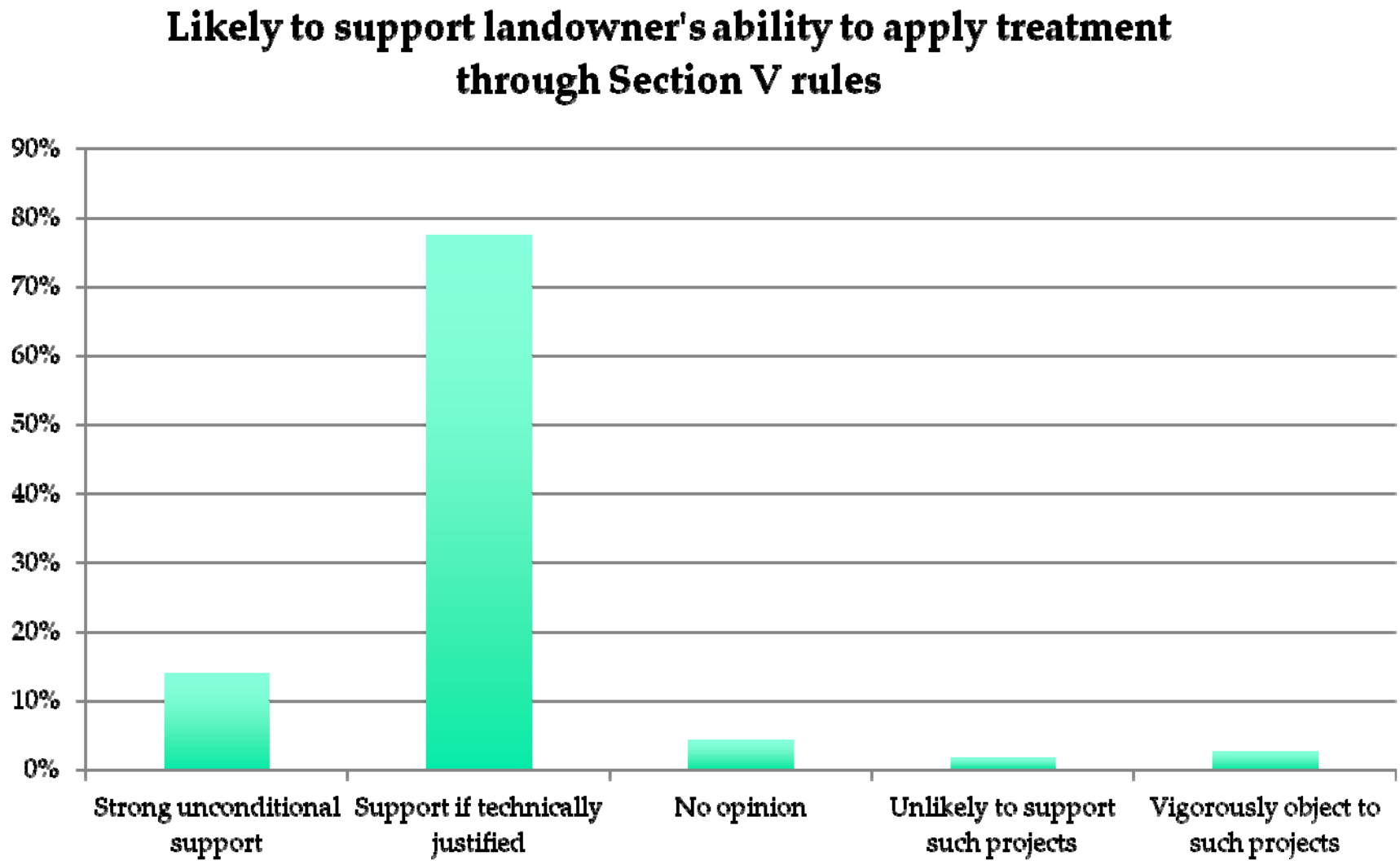
n=123 responses

VTAC Survey Summary

Riparian harvest management philosophies



VTAC Survey Summary



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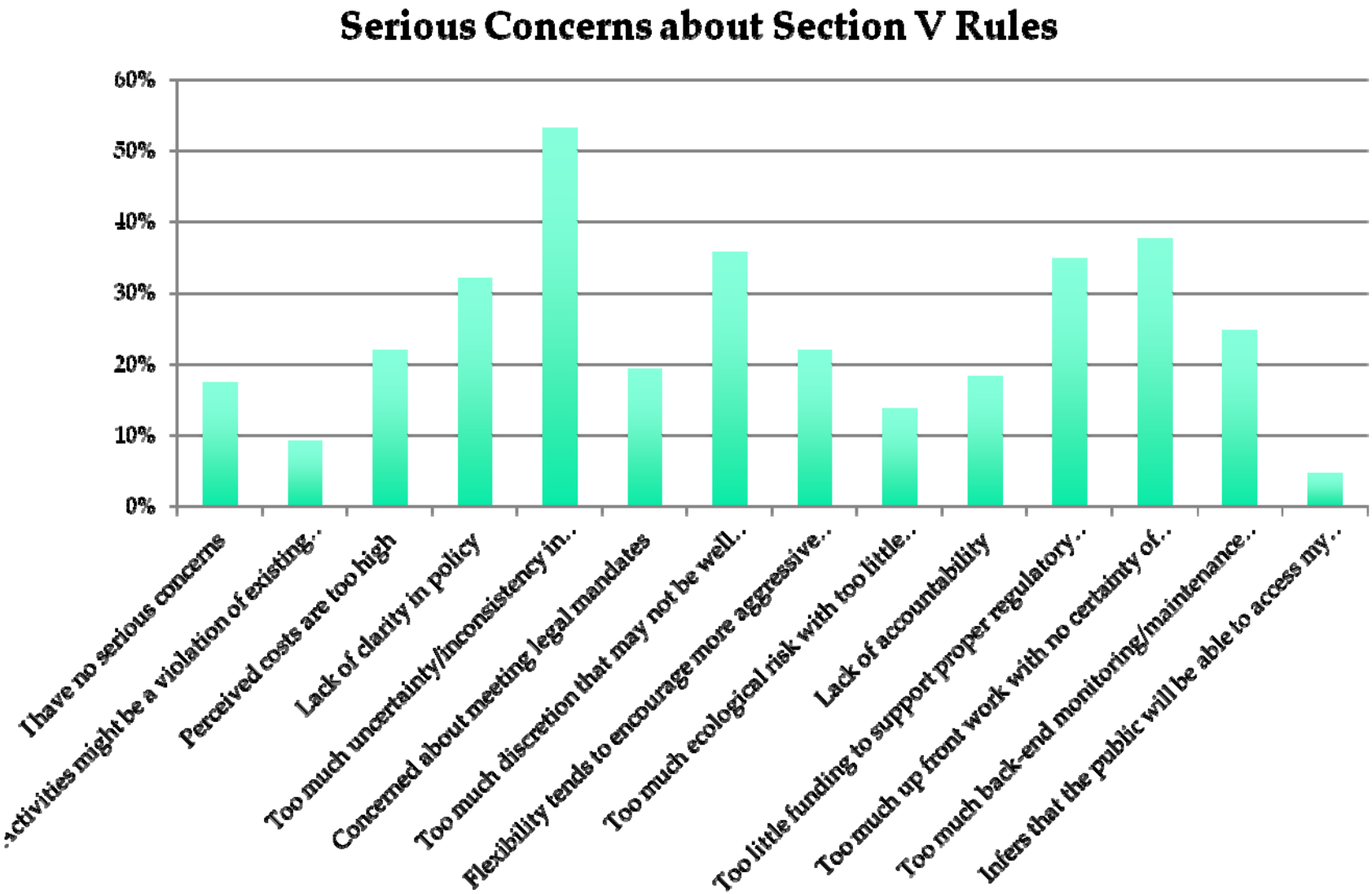

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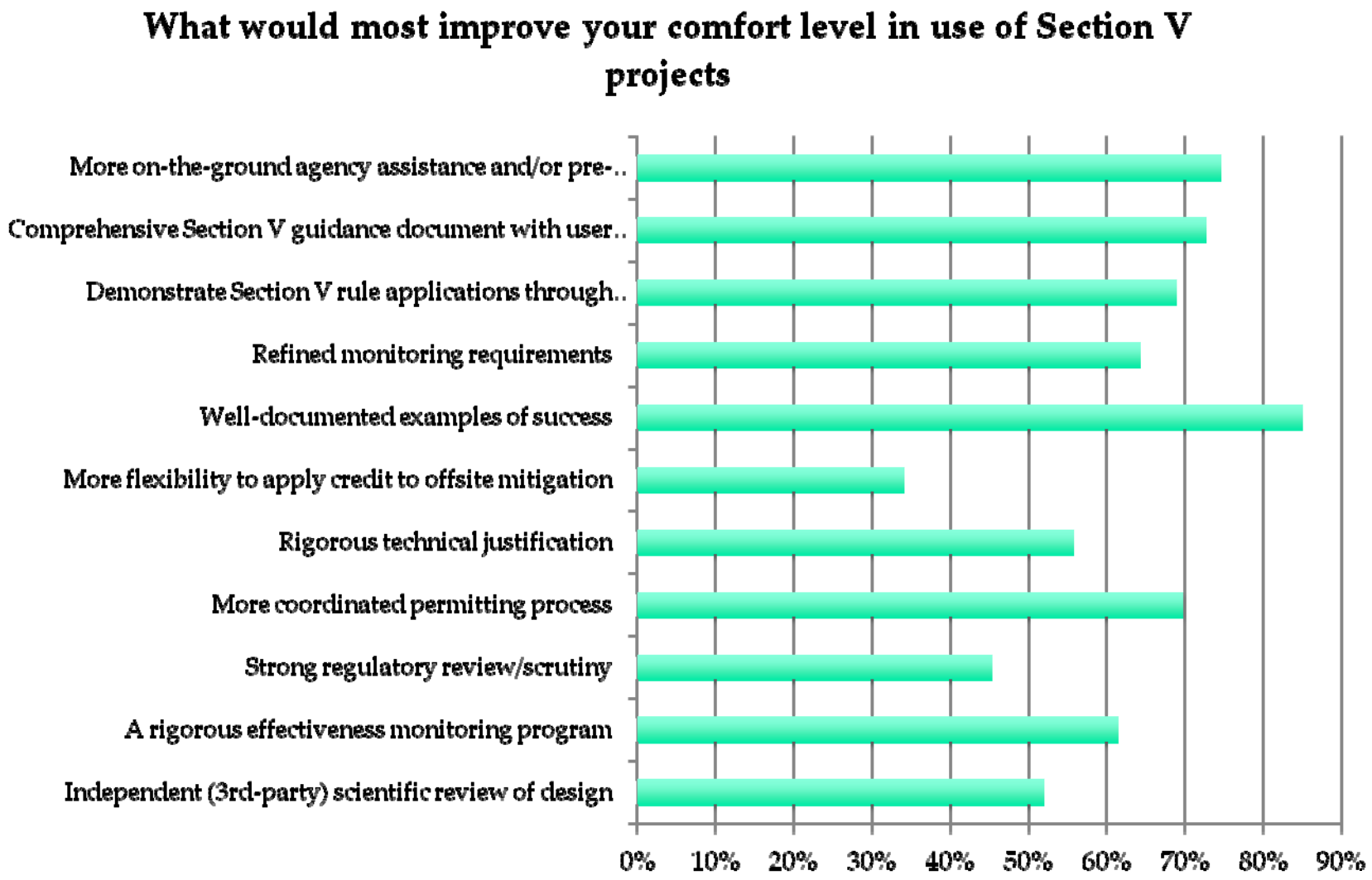

Survey: Take-Home Messages

1. Widespread agreement that site-based riparian management can be used where it is justified
2. Need increase level of certainty for extensive use of Section V process
3. Need successful pilot projects & guidance to demonstrate to landowners that approach can work

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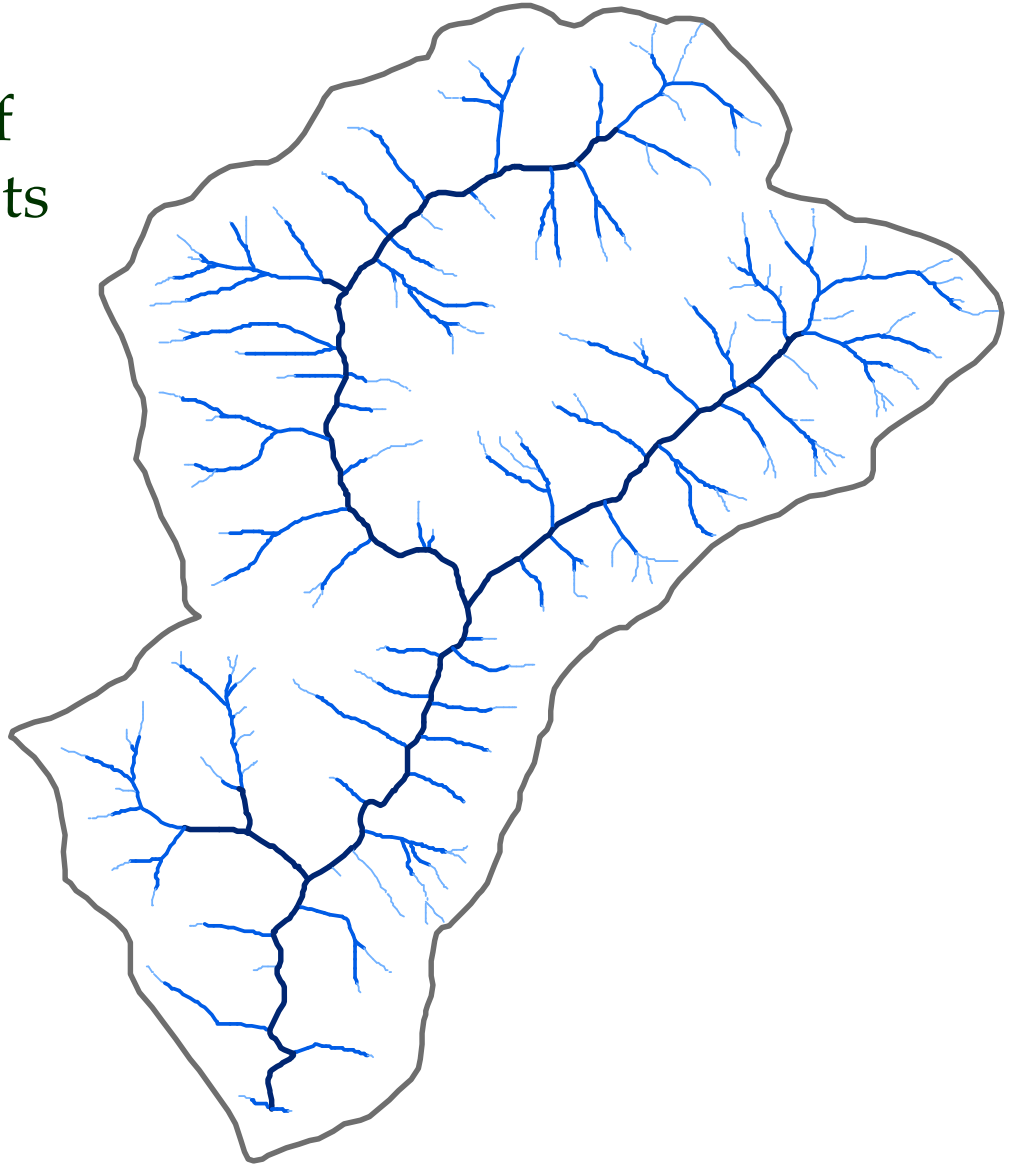
Framework for Riparian Design

Framework for Riparian Design

1. Relative importance of riparian function inputs for forming aquatic habitat & improving water quality

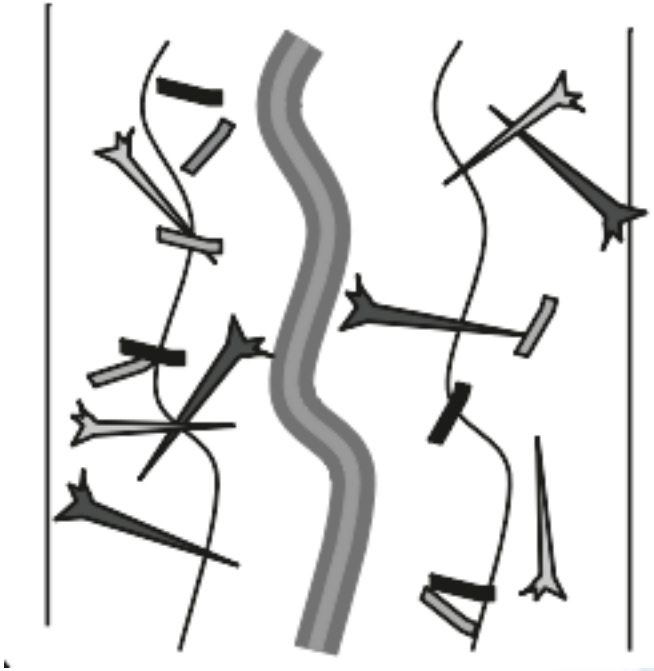
2. Transport of riparian inputs to downstream channels

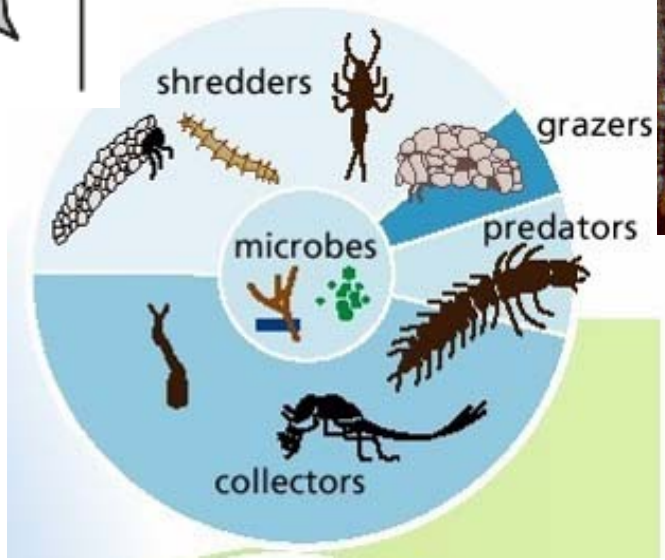


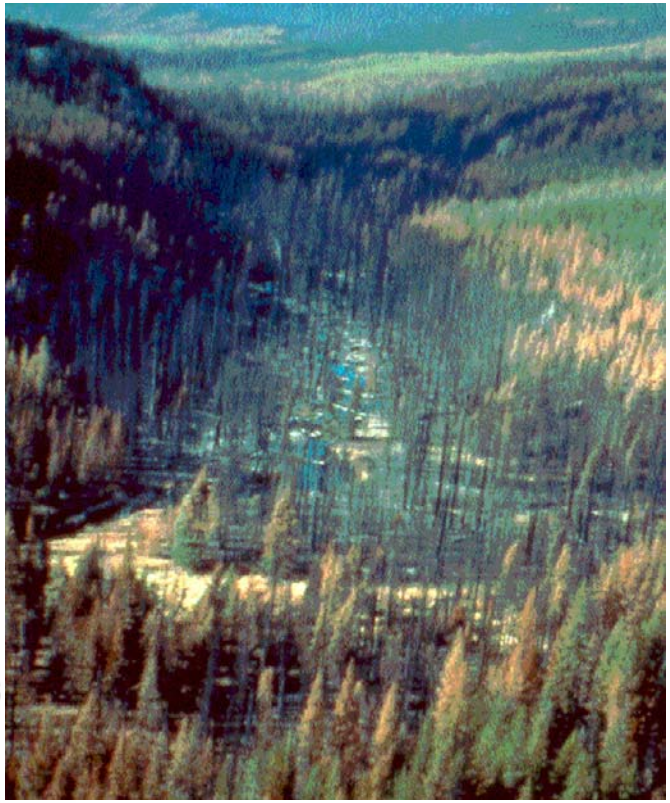
Geomorphic Influences

		Function input (channel response metric)			
Channel type	**Stream size**	**Large wood** (pool formation)	**Shade** (temperature)	**Sediment** (grain size)	**Litter** (retention)
colluvial	small	M	H	M	H
bedrock	all	L	H	L	L
cascade	all	L	M	M	L
step pool	all	M	H	M	M
plane bed	all	H	H	H	L
pool riffle	small	H	H	H	H
pool riffle	medium	H	M	H	H
pool riffle	large	H	L	H	M
dune ripple	small	M	H	L	M
dune ripple	medium	M	M	L	L
dune ripple	large	L	L	L	L
alluvial fan	all	H	M	H	H

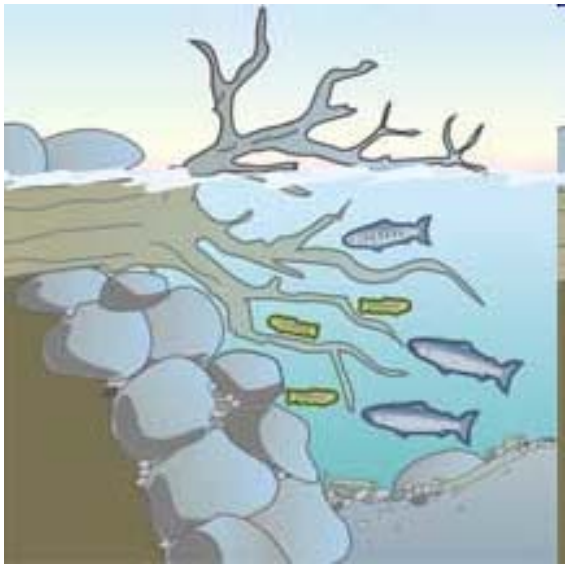
Types of Section V Projects

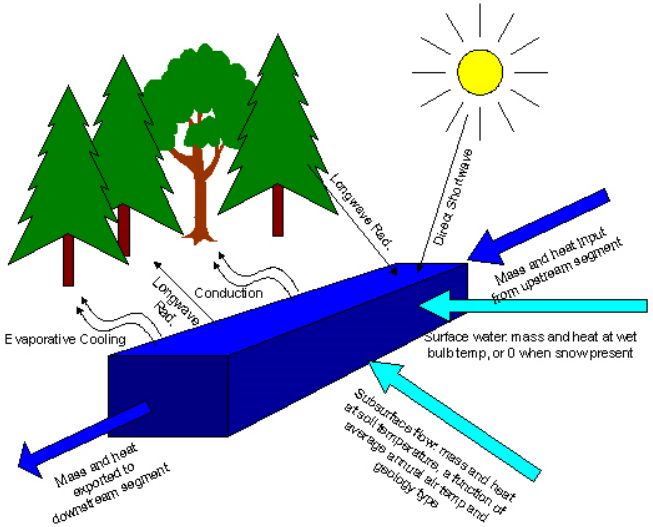






Additional Key Factors

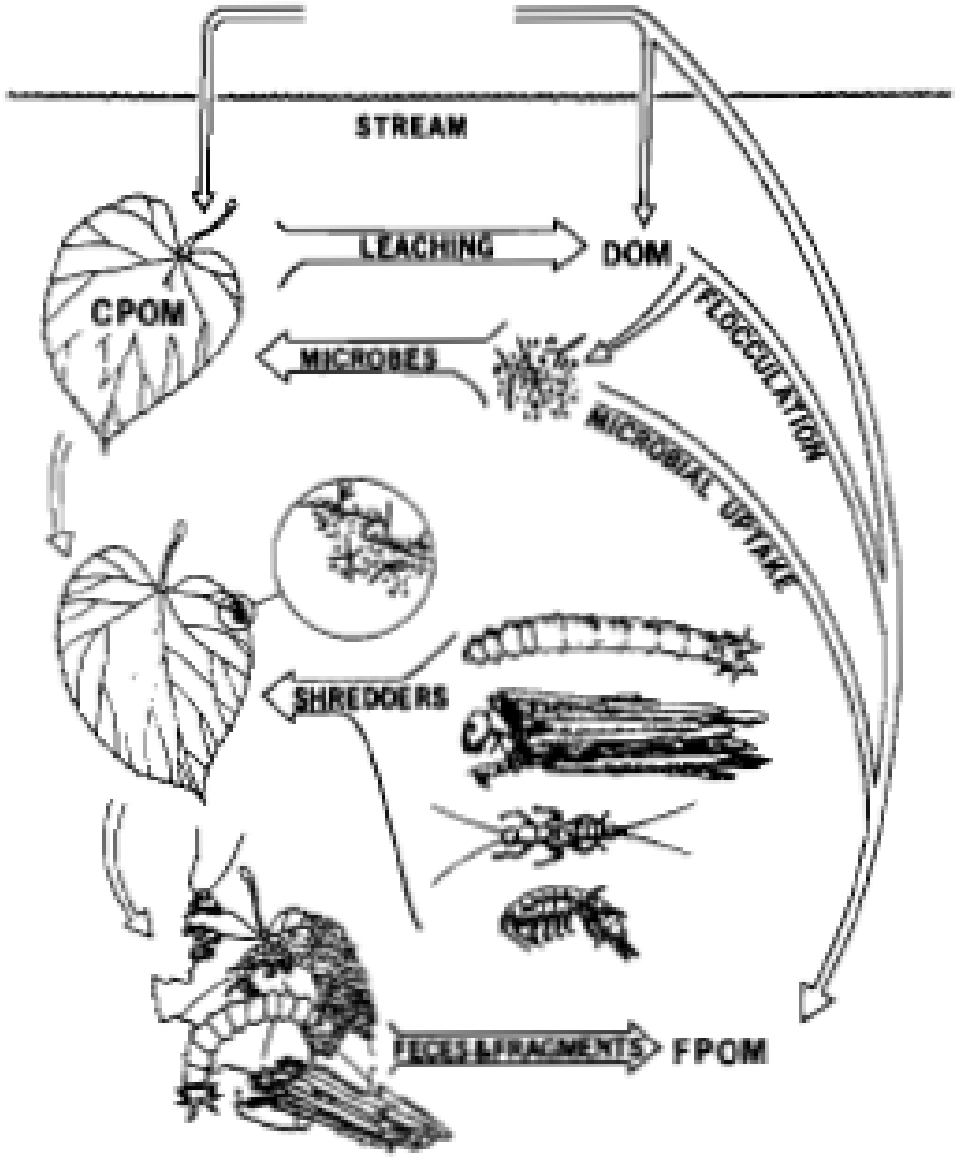




Large Wood Placement

Thinning to Affect Recruitment

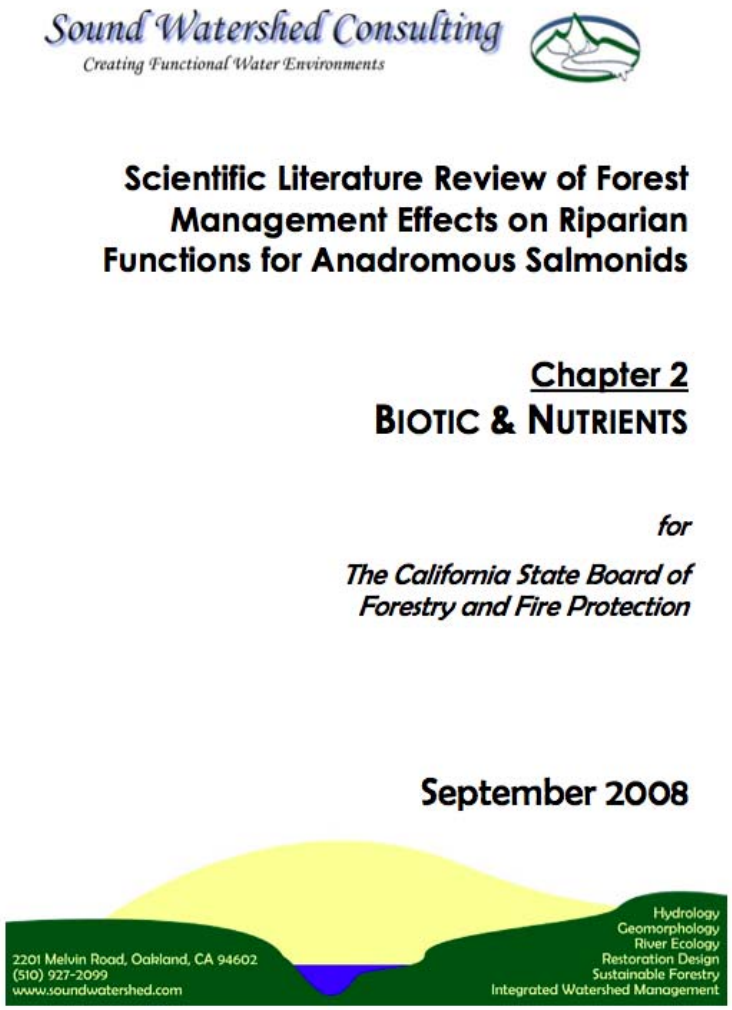
Litter Inputs



Biotic Diversity & Nutrients

"Riparian stands dominated by deciduous vegetation (overstory and understory) within 10-20m of the stream may increase biomass of consumers, including fish, as a result of nutritious litter inputs and terrestrial invertebrate subsidy"

(Allan et al. 2003, Richardson et al. 2004, Wipfli & Musselwhite 2004, Hoover et al. 2007)"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Scientific Literature Review of Forest Management Effects on Riparian Functions for Anadromous Salmonids

Chapter 2
BIOTIC & NUTRIENTS

for

The California State Board of Forestry and Fire Protection

September 2008

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www.soundwatershed.com

Hydrology
Geomorphology
River Ecology
Restoration Design
Sustainable Forestry
Integrated Watershed Management

Biotic Diversity & Nutrients

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- a sufficient number of nitrogen-fixing deciduous trees *distributed at key locations within the stream network*;
- a sufficient number of riparian canopy gaps that support primary and aquatic macroinvertebrate production while balancing effects on other riparian functions.

(Wilzbach et al. 2005; Kiffney and Roni 2007; Modenke and Ver Linden 2007; Poor and McDonnell, 2007; others)

Fuel Hazard Reduction

"Dense stands of trees in the Angora SEZ likely contributed to the rapid [fire] spread upslope to Angora Ridge…"

-Murphy et al. 2007

VTAC Guideline Document

1. Criteria for site suitability
2. Site-based objectives
3. Treatment option alternatives
4. Data necessary to justify proposed actions
5. Administrative procedures for agency approvals

Thanks to:

VTAC

- Dr. Kevin Boston
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AGENCY REPRESENTATIVES

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