

Eating the Elephant in Our Watersheds

Brent Racher, Restoration Solutions, LLC

Brent Racher is a manager or partner for two natural resource management companies in New Mexico, Racher Resource Management and Restoration Solutions; and two woody biomass supply/utilization/development companies, Western Biomass and Southwestern Biomass. After receiving his BS from New Mexico State University in range science, he completed an MS and PhD specializing in range ecology, fire ecology/behavior, and range improvements from Texas Tech University.



Brent's knowledge and experience in fire behavior, fire ecology, and the land managers' need for expertise in prescribed burning prompted him to start Racher Resource Management, LLC. In this endeavor, he has provided private and government entities with expert fire management for planning and operations, much of the time as a turn-key service. Once in private industry, he also realized that vegetation and habitat management in rangelands, forests, and riparian ecosystems largely lacked the capitalized resources that could obtain a set of objectives and implement them. So, he helped form Restoration Solutions, LLC to bring a combination of the most progressive mechanical and chemical vegetative manipulations to the land managers in need of that expertise. Currently, Brent is collaborating to expand renewable energy resources in the West through the utilization of ecologically unbalanced biomass in forests, woodlands, and non-native phreatophyte communities. He is currently serving as the President of the New Mexico Forest Industry Association.

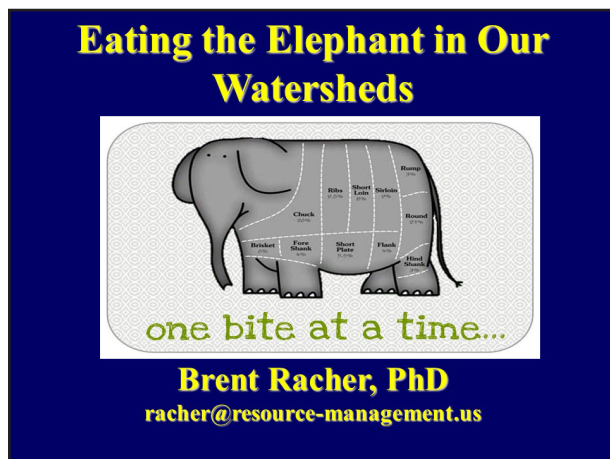




Figure 1. Introduction.



Figure 2. Evidence to act.

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**Forest Treatments Can Increase
Snowpack and Water Yield**

- **Thinning can reduce snow sublimation by up to 50% (Veatch et al. 2009)**
- **Winter sublimation in burned areas reduces snowpack by 50% (Harpold et al. 2013)**




Figure 3. Forest management practices can impact snowpack yield.

The Elephant...

	Total Acres	Treating 40% (Finney et al.)	20-yr Goal = 2% per year	Cost
Frequent Fire Forested Watersheds	6.9 Million	2.7 Million	135,000	\$95 Million
All Watersheds – Top to Bottom	25 Million	10 Million	500,000	

Figure 4. The elephant metaphor.

We are already getting some done...

- **2014**
- Estimate 33,000 acres restored in frequent-fire forests
- \$30+ Million spent
- Much more in the entire watershed

- **2015**
- **MORE** is getting done (just not sure how much, yet)

Figure 5. Current progress on forest management.

How do we eat more...

- **Prioritize...to describe the path forward**
- **Increase resources allocated**
- **Coordination**
- **All Hands on Deck**

Ranking Criteria

1. Wildfire Risk
2. Water Quality/Supply
3. Economic Opportunity
4. Forest Health
5. Fish & Wildlife



Figure 6. Possible management solutions.

Keep eating... Long-term

- **Monitoring**
 - Scientific needs
- **Planning**
- **Action**
 - Consistent implementation funding
 - Adaptive



Figure 7. Possible long-term management solutions.



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Which is our future?



Figure 8. Forest variations for the future.