A scenic landscape photograph of a forested valley. In the foreground, there is a grassy field. A river flows through the middle ground, surrounded by dense evergreen and deciduous trees. In the background, misty mountains are visible under a cloudy sky. The text is overlaid on the top left of the image.

# Cross Scale Stewardship Capacity of Community Based Resource Management Organizations from Northern California across the American West to Washington DC: Will it Work for Cannabis?

**Yvonne Everett, Humboldt State University**



# Landcare Lanka Launch 2010: Executive Director Kamal Melvani



Wash a farmer's feet and he will be king





Landcare Tour of Victoria, February 2013



THANK YOU



## Watershed Research and Training Center 1993-2017



**HUMBOLDT STATE UNIVERSITY**  
*A California State University Campus*



NorthCoast Regional Land Trust 2005-2017





## **OUTLINE**

- 1. CBRM makes communities and landscapes more resilient**
- 2. Polycentric Governance – A Cautionary Tale**
- 3. A View from the Western United States**
- 3. Community based resource management organizations (CBRM) local regional and national networks influence federal policies**
- 4. A New Challenge - The Cannabis Green Rush in California**
- 5. Impacts of Cannabis cultivation on the environment, on communities and on economies and CBRM responses to these impacts**
- 6. Concluding thoughts**



Roosevelt Elk, Redwood National Park



# Community Based Resource Management

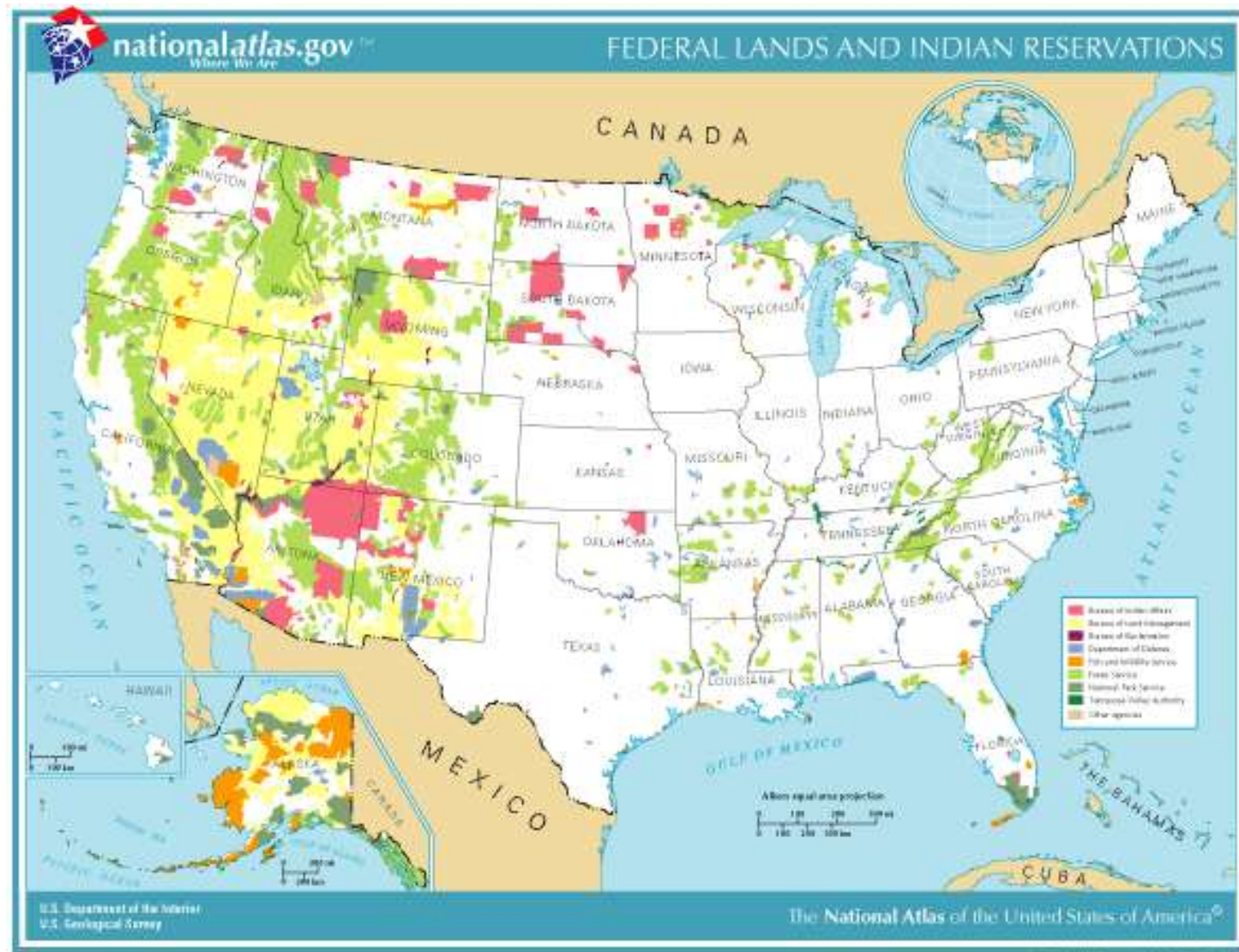
A photograph of three people standing in a river, likely participating in a cleanup activity. On the left, a man in a white shirt and cap holds a fishing net. In the center, a woman in a yellow safety vest and blue pants stands with her hands on her hips. On the right, a man in an orange safety vest and cap holds a white bag. The background shows lush green trees and foliage.

People of place have a vested interest in the long term sustainable use of local resources beyond the interests of state or federal governments or corporations, and local communities understand and bring local and indigenous knowledge to bear for effective resource management in their local environments (Brosius et al 2005)

## A Cautionary Tale:

What happens when a key level of governance checks out

# LAND TENURE IN UNITED STATES: PRIVATE, PUBLIC, TRIBAL OWNERSHIP KEY INFLUENCE ON DIFFERENT MODELS OF CBRM

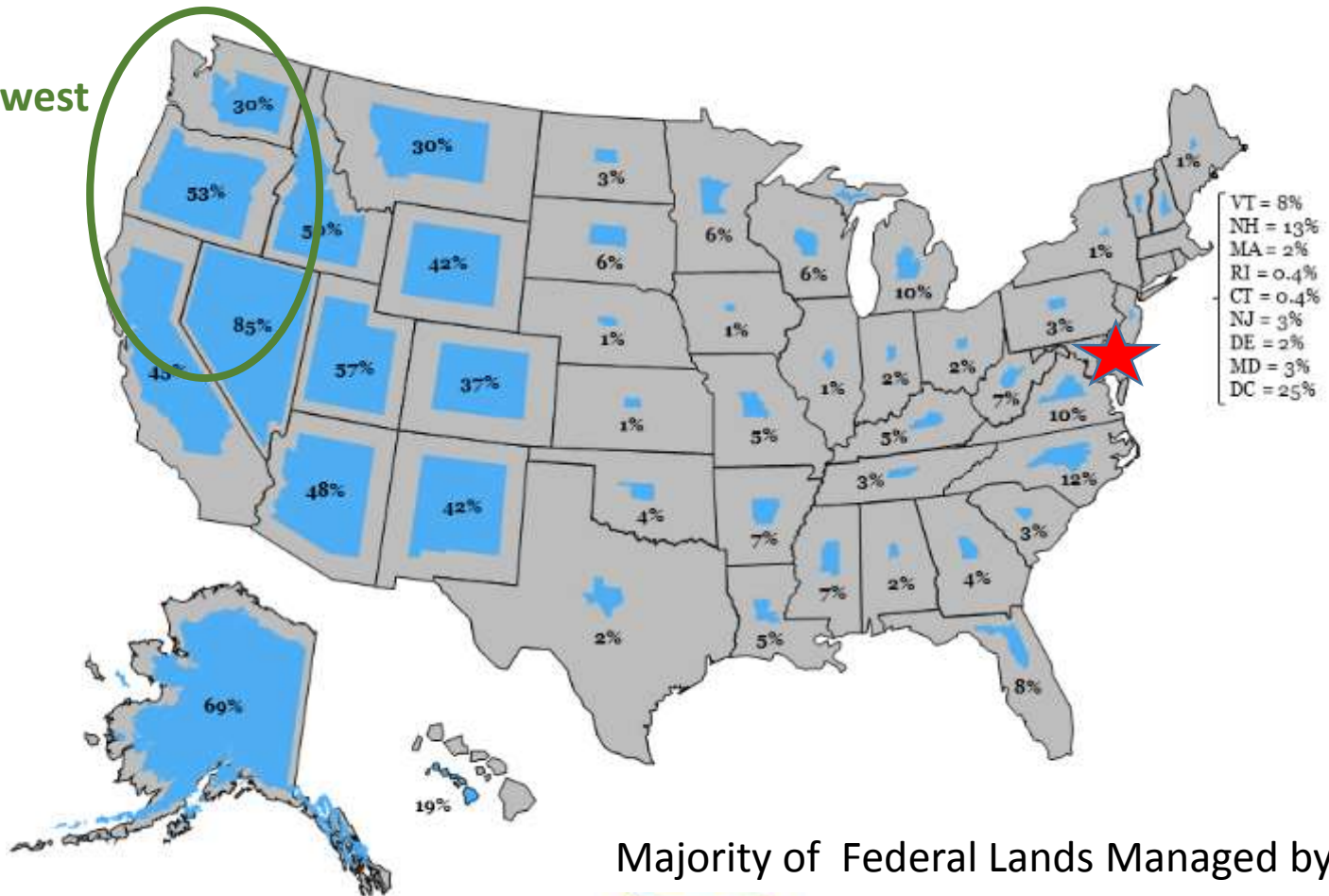




# Federal Land as a Percentage of Total State Land Area (28% of United States)

## Pacific Northwest

Washington  
Oregon  
California



Majority of Federal Lands Managed by



Data Source: US General Services Administration, Federal Real Property Profile  
<http://www.ecowest.org/wpcontent/uploads/2013/05/Slide12.png>



# MAJOR SHIFT IN FEDERAL LAND MANAGEMENT IN PACIFIC NORTHWEST IN 1990's



WorldForestIndustries.com

- Washington, Oregon and California forest most productive timber in the US
- Northern Spotted Owl listed as threatened species under Endangered Species Act in 1990 – 13% of primary forests remained
- In 1992, a federal court injunction halted federal forest management
- From 1994 shift from sustained yield to ecosystem management on federal forests



# Changes in Federal Forest Land Management in the Western US: Decline in Timber Harvest by 90% leads to decline in investment in Federal Land Management

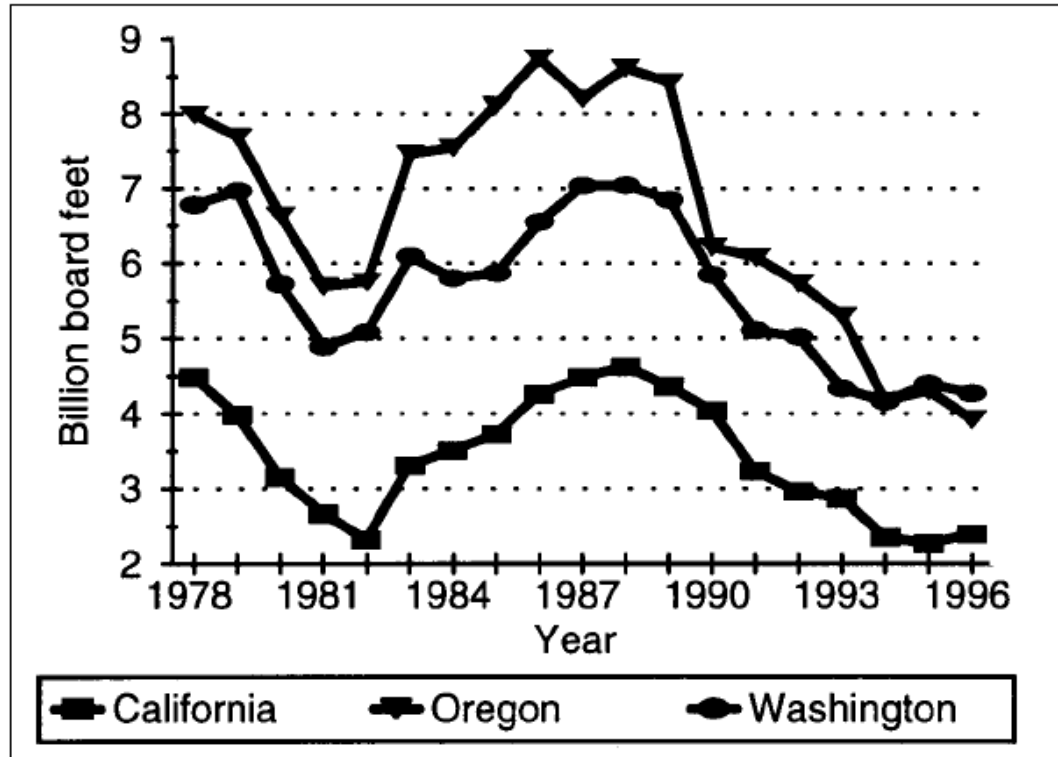


Figure 2—Total timber harvest for California, Oregon, and Washington, 1978 through 1996.

REDUCED AGENCY BUDGETS  
CONSOLIDATION OF  
DISTRICTS

STAFFING DOWN  
25-59%

VACUUM IN GOVERNANCE  
ON FEDERAL LANDS

FOREST DEPENDENT RURAL  
COMMUNITIES DECLINE



# 1990's-2000's CBRM RESPONSES: LOCAL, REGIONAL, NATIONAL

**LOCAL:** LAND AND RESOURCE MANAGEMENT WITH PRIVATE LANDOWNERS AND ON STATE AND FEDERAL LANDS



forest, meadow, watershed restoration, fuels reduction and prescribed fire, biomass energy generation, recreational trails development, worker retraining, youth engagement, education and economic development

**CBRM groups stepped into to collaborate and fill institutional gaps across the West**



# FOCUS: RESTORATION ECONOMY

## Endangered Species and Cultures



Spawning Coho Salmon



Ron Reed, Karuk Tribal Member Dip Net Fishing on the Klamath River



## **REGIONAL:**

### **COALITION BUILDING TO RAISE VOICES ON KEY ISSUES**



80 CBRM Groups  
from across  
Western US

## **NATIONAL:**

### **PARTICIPATION IN DEVELOPING FEDERAL POLICY AND LEGISLATION**



Lynn Jungwirth, ED Watershed Center, Hayfork in Washington DC 2013  
e.g. RURAL SCHOOLS ACT; NATIONAL FIRE PLAN, HEALTHY FOREST RESTORATION ACT



# FOCUS NORTHERN CALIFORNIA EMERALD TRIANGLE



## California

population 39.5 million

## Humboldt County

10,500km<sup>2</sup>

1066mm avg precip.

136,000 people **15 people/km<sup>2</sup>**

## Trinity County

8,309km<sup>2</sup>

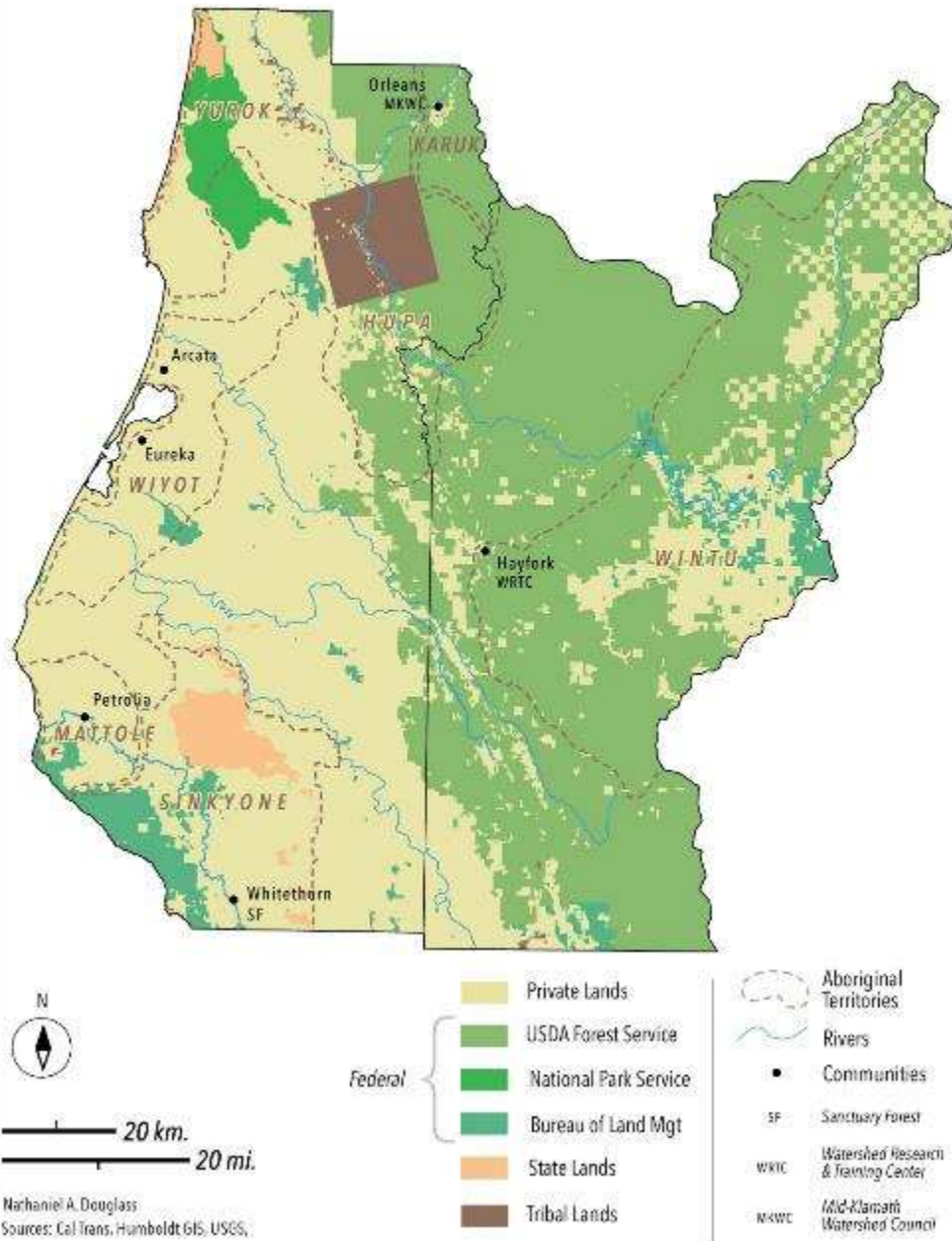
1244 mm avg precip.

16,000 people **4 people/km<sup>2</sup>**

**REMOTE, RURAL, MOUNTAINS**



# Public, Private and Tribal Lands in Humboldt and Trinity Counties



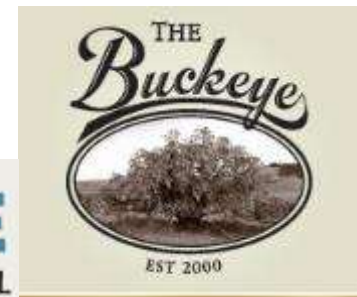
(Sequoia sempervirens)

**Humboldt County 25% Federal Lands;**  
**Trinity County 80% Federal Lands**



# CBRM GROUPS In Humboldt and Trinity Counties

## Focus: Healthy Forests, Watersheds and Communities





PRIVATE LANDOWNER BASED COMMUNITIES

FOREST AND WATERSHED RESTORATION WORK

STRONG PARTNERSHIPS WITH CALIFORNIA STATE AGENCIES

COMMUNITY CONSERVATION OUTREACH AND EDUCATION







# NORTHCOAST REGIONAL LAND TRUST

2000

*The Northcoast Regional Land Trust is dedicated to the protection and economic viability of working landscapes, farms, forests and grazing lands, and to the preservation and protection of land for its natural, educational, scenic and historic values.*

Works with voluntary landowners  
to conserve working lands  
through placement of  
conservation easements

25,000 acres (10,000 ha)  
under easement

<http://ncrlt.org/>







Founded in 1992  
Annual budget over \$3 million  
**Healthy Forests Healthy Communities**

SMALL COMMUNITY  
SURROUNDED BY FEDERAL  
LANDS

- FUEL REDUCTION AND FOREST RESTORATION,
- WATERSHED AND FISHERIES RESTORATION
- BIOMASS UTILIZATION

STRONG PARTNERSHIPS  
ACROSS REGION AND NATION



<https://thewatershedcenter.com/>



2000

SMALL COMMUNITY SURROUNDED BY FEDERAL LANDS  
STRONG PARTNERSHIP WITH KARUK TRIBE, WORKING RELATIONSHIP  
WITH USFS

Klamath River  
Restoration

Fuels Reduction  
and Prescribed  
Fire

Food Security

[www.mkwc.org/](http://www.mkwc.org/)





# CBRM Partnerships with Agencies Tribes, across Regions



Frank Lake, USFS, Bill Tripp, Karuk Tribe, Nick Goulette WRTC in Orleans 2011

**CBRM groups making progress, networking, beginning to influence their world....**



# A NEW WICKED PROBLEM



## The Cannabis Green Rush in California



Photo: Piper McDaniel <https://thegrowingdivide.com/profiles/the-college-graduate/>



# The Federal/State Cannabis Divide: Quasi Legality

- Cannabis (*Cannabis sativa*) is a Federally Controlled Substance = **ILLEGAL**
- **California 1996 California Compassionate Use Act (SB 215)**
- Medical use of Cannabis is decriminalized or legal in 20 states and Recreational use is now legal in eight
- **This dichotomy creates a huge Black Market (Gianotti et al 2017)**



- CA supplies an estimated 79% of national supply of Cannabis (Corva 2014)
- **Value of California crop has been estimated at \$31 billion = top 10 CA agricultural crops (Harkinson 2014)**
- Prices are highly variable. One source suggests value in early 2017 was \$1,600 /lb
- **Emerald Triangle (Humboldt, Mendocino and Trinity Counties) are the heart of the out door and green house production boom (Corva 2014; Butsic and Brenner 2016)**



# Ecological, Social and Economic Impacts of Black Market Boom

(Powers et al 2015; Shogren, 2016; Lechner et al, 2017; Morrone et al 2015)

## Environmental impacts are critical

(Butsic and Brenner 2016; Short Gianotti et al 2017; Bauer et al 2015)

Increasing spread of Cannabis grows from early 2000's to present (private lands)



Trinity Pines **7- 2004** (Google Earth)



Trinity Pines **5-2017** (Google Earth)



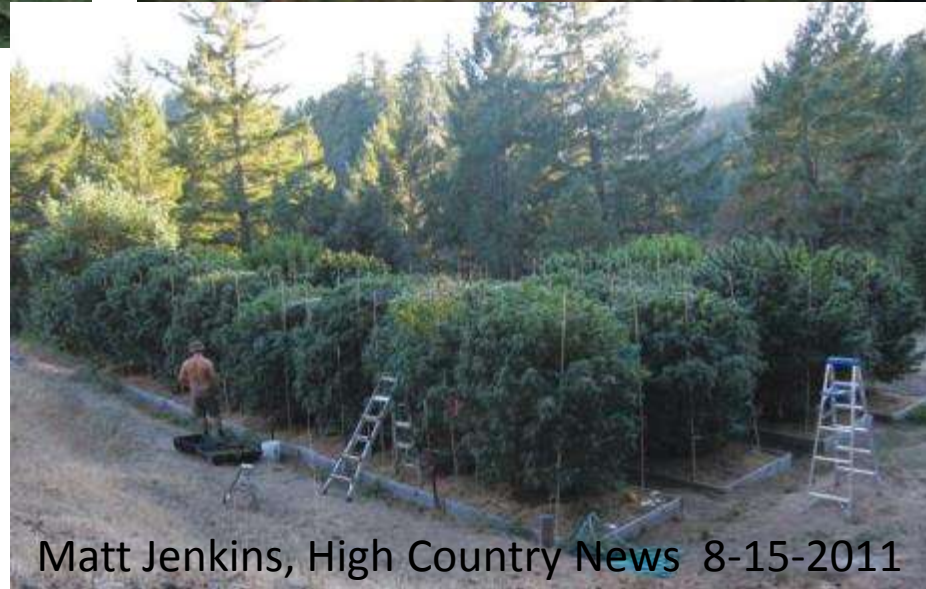


Greenhouse Grow  
Outdoor Grow



Public lands: outdoors

Private lands: greenhouses or  
outdoors





# There are an estimated 10,000 grows in Humboldt County

Random sample of 60 of  
112 watersheds in  
Humboldt County in  
2012/2013

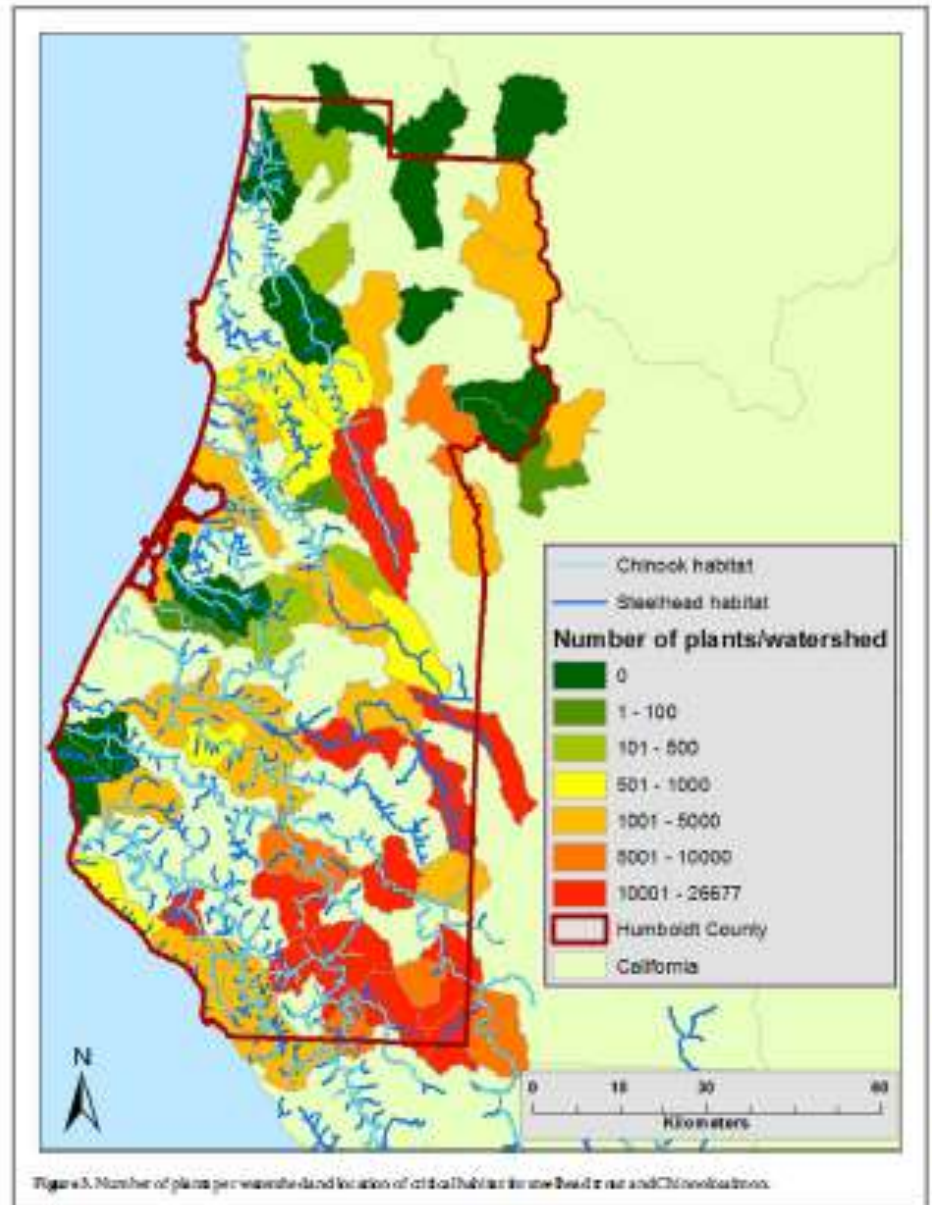
4,428 grow sites with an  
estimate of 297,954 plants  
in greenhouse and  
outdoor grows

At least 1 lb yield per plant

## Water use:

315 gallons per lb of buds

Van Butsic and Brenner (2016)



Grows on public and private lands in Humboldt County

# HOW IS CANNABIS AFFECTING LANDSCAPES AND COMMUNITIES?

## 1. What are social, economic and environmental impacts of cannabis growing on communities?

Land Tenure	Federal Public Land	Private Land
ENVIRONMENTAL	?	?
SOCIAL	?	?
ECONOMIC	?	?

## 2. How have CBRM groups responded?

Methods: Interviews, participant observation, literature review



# Impacts on the Environment:

## Trespass or “Guerilla” Grows on Federal Land (National Forest or Bureau of Land Management lands)

1. Cartel Grows bring in laborers from other countries to work – no legal status or protection for these workers
2. Every creek near a road has a grow up into the headwaters
3. Little Law Enforcement (one *law enforcement officer per 2 million acres*)
4. Only 1 in 10 are getting cleaned up

*“ The trespass grows are the worst. They draw on seeps and springs for water which really impacts the fish downstream. They use carbofuran (banned by US EPA in 2008 for use in agriculture in the US) which is a highly toxic insecticide that is being used to kill all manner of pests – ¼ teaspoon will kill a bear. You need a hazmat suit to remove it. ”* (Interview with CBO staff person who has helped to clean up grows on federal lands.)

# IMAGES OF TRESPASS GROW CLEAN UPS ON FEDERAL FOREST LANDS



Photos courtesy Greta Wengert & Mourad Gabriel, Integral Ecology Research Center  
<http://www.ierceecology.org/marijuana-grow-site-environmental-clean-up-project-summaries/>





Pacific Fisher *Martes pennanti pacifica*  
Federal Species of concern ([pacificbio.org](http://pacificbio.org))



4 lbs Neurotoxicant Rodenticide, Six Rivers National Forest, CA 2017



California Black Bear  
Photo: Jitze Couperus ([evotis.org](http://evotis.org))



Pesticides left behind at a trespass grow (M. Gabriel in Thompson et al 2013)



# MOST SIGNIFICANT ISSUE: WATER

- During the last two years of drought, streams, rivers and wells ran dry in summer growing season;
- Fertilizers and pesticides pollute headwaters of fish bearing streams





# Impacts on the Environment: Grows on Private Land – often right next door

- Land fragmentation
- Water diversion
- Sedimentation of streams
- Forest clearing
- Impacts of chemicals
- Lights at night
- Noise of generators



***“Many newcomers are ignorant –they don’t know how to manage with natural resources or just don’t care; they will cut down oak trees because they think they are dead; they will mix fertilizer in the creek”***



## Land values skyrocket

- Subdivision of large ranches from 100's-1,000s of acres to 40 acre parcels
- Ecological and Social Fragmentation – roads, erosion, loss of wildlife habitat, many new neighbors who are not ranchers....
- Prices up 90-150% in four years (Houston, 2017)
- Locals cannot afford to buy land

100 ha in remote part of county sold for \$600,000 in 2015 was on sale for \$8 million in 2017 with a cannabis grow on it.



# Impacts on Communities

## **WATER IS SCARCE IN DRY (GROWING) SEASON**

- Neighbors argue over water
- Over 10,000 gallons were stolen from Bridgeville school over Labor Day Weekend in September, 2013 (Sims, 2013)



Brian Johnson, Curtis Knight and Mike Sweeney SFC July 31, 2015

# Impacts on Communities

## LACK OF LAW ENFORCEMENT

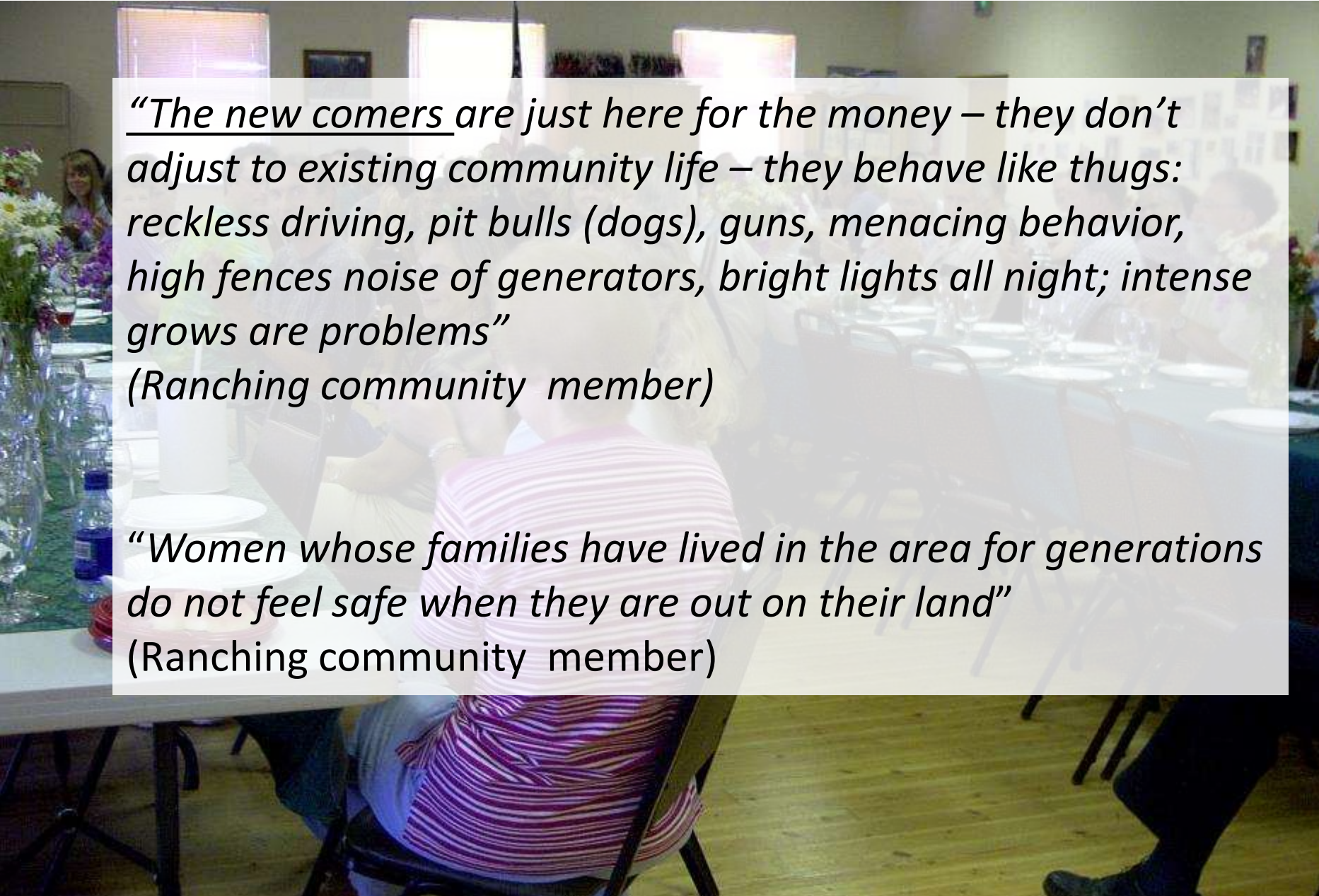
- Decline in respect for law enforcement – *“the Sheriff just doesn’t show up”*
- Increase in violent Crime – people stealing Cannabis from one another or arguing over deals
- Shift toward opiates – people trade Cannabis for Heroin, Methamphetamines



Photo: Piper McDaniel



## Impacts on Communities: Quality of Life

A photograph of a community meeting. Several people are seated at long tables covered with white cloths. In the foreground, a person with blonde hair wearing a pink and white striped shirt is seen from the back. The room has large windows with blinds, and there are floral arrangements on the tables. The text is overlaid on a semi-transparent white box in the center of the image.

*"The new comers are just here for the money – they don't adjust to existing community life – they behave like thugs: reckless driving, pit bulls (dogs), guns, menacing behavior, high fences noise of generators, bright lights all night; intense grows are problems"*

*(Ranching community member)*

*"Women whose families have lived in the area for generations do not feel safe when they are out on their land"*

*(Ranching community member)*

## Impacts on Communities

### **“GROWERS DON’T PAY TAXES – FREE RIDE ON SOCIAL SERVICES**

- Radical swings in enrollment in schools: *“At the beginning of the school year (during harvest season) there can be 30-50 new kids that suddenly need teachers that were not budgeted for.”* (CBRM respondent)
- *“Increase in structure fires - 9 out of 10 are due to indoor grows – Volunteer Fire Departments have to respond”*

### **“CANNABIS HAS DIVIDED THE COMMUNITY”**

*“Anyone in the community can be a grower – old, young, rich, poor, but there is a divide in the community between people who grow or are supportive and the people who are against it or at least who are very concerned about the impacts”.* (CBRM respondent)

### **“THE PEOPLE HAVE CHANGED”**

*“There are new, more diverse people now – they try to make the community work anew – but there is less cohesion.– some new people are stepping up. At the same time there are some great new young families with willing to step into new roles ...we’ll see if they stay.”* (CBRM respondent)



# Impacts on Local Economies

## **LABOR RELATIONS:**

*The watershed organizations find it difficult to find people who are willing to work for a standard wage in watershed restoration, fuel reduction and trail building. It is much easier for young people to make more money tending grows or trimming.*

## **CASH LEAVES:**

*“There is less economic benefit than we had thought at first. At first there were lots of restaurants but most have shut down or are only open for a few hours or for a short season. There are lots of dollars here but the money doesn’t stay here or get reinvested – they take their money and go to Thailand or Hawaii until next year. Also there are absentee owners who have people working for them here – that money all goes.” (Response from a larger town)*

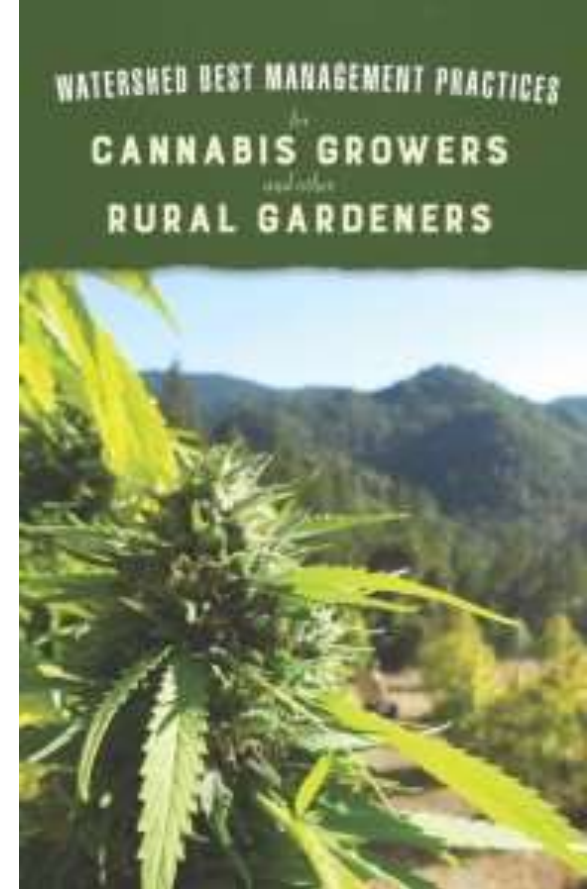
## **NEW OPPORTUNITIES:**

*Cannabis business consulting – especially regarding regulatory compliance is a growth industry (Response from several communities)*



# CBRM responses to these impacts

- **Internal Debates CRBM Boards**
  - **Land Trusts combat Land Fragmentation**
  - **Sanctuary Forest's Water Forbearance Program**
  - **Media Outreach and Manuals**
  - **Law suits filed against USFS to force better management**
  - **Growing Greener Workshops**
- " The first year we scheduled the workshop with a reggae band and held it at the local coffeeshop. The band played a set, then we talked about stewardship and then the band played the second set. There were over 200 people there!"*
- **Cooperating with federal and state agencies and other CBRMs on trespass grow clean up**







## BRIDGES: CBRM Groups working with local government on defining rules that will protect the environment

- Local county working to develop rules – strong focus on environmental impacts working with state agencies
- Official estimates indicate there are more than 10,000 large-scale cannabis farms in Humboldt County, with only about 2,300 of them having entered the permitting and regulation process to become legitimate. (Northcoast Journal 10-26-17 Greenson,T.)
- Enforcement is challenging - state agencies and local government hiring new staff



## Situation in Fall 2017 with legalization months away:

- California consumes 2.5 million pounds of cannabis per yr. but produces 13.5 million pounds most of which leaves the state (CA Dept of Agriculture 2017).
- **Will there be a federal government crack down on California?**
- CA trying to set rules for legal growing however legal growers have to invest to come into compliance which makes their crop more expensive
- **They have to compete with lower black market prices from illegal growers (4/5 of growers).**
- Local governments cannot enforce rules
- **Large disincentive to growers to register and become legal.**



OCTOBER 2017

## “More Than \$1 Billion Worth of Cannabis Burns in Northern California Wildfires”



\$21 billion industry – no crop insurance

(John Ross Ferrara / Lost Coast Outpost, Monday, Oct. 16)



## **Moving target: situation this week**

Humboldt County sent dozens of notices out at the end of October giving owners 10 days to desist or come in for a permit. Expected to be fined \$10,000 per day for violations (growing, ungraded roads, work in streamside mgt. areas etc.)



Source: Week in Weed, Northcoast Journal [northcoastjournal.com](http://northcoastjournal.com)



## Yesterday: Lost Coast Outpost Nov 6 2017

On 11-03-17 at about 3:51 pm Deputies were dispatched to the report of an armed robbery that was occurring now on Bald Hills Rd near Pine Creek Rd. The land owner reported that one of his 30 plus employees had texted him to report they were being robbed. The land owner claimed he had a permitted marijuana grow at the location. It was reported that three Native American looking men, all under six feet tall, wearing tactical style gear with the word "SWAT", had come onto the property. The suspects were armed with AR-15 and AK-47 style rifles. All of the workers were forced to lay on the ground and ordered to remove all personnel property. All of the personnel property, and approximately 1000 pounds of marijuana was taken along with several vehicles. Two of the suspects referred to themselves as "Killer 1" and "Killer 2". The suspects left the scene and were last seen headed eastbound on Bald Hill Rd towards Hoopa.

<https://lostcoastoutpost.com/2017/nov/6/1000-pounds-marijuana-stolen-men-tactical-gear-bal/>

# Where does this leave communities, landscapes and fish?



## Every Fish Counts

In 1963 Spring Chinook Salmon populations in the South Fork Trinity River were estimated at **10,000**.

In 2015 there were only **20** fish counted.

Our Spring Chinook are at risk.

You can help



Did you know... that here in California we are at risk of losing our Spring Chinook Salmon right now?



# In summary

**Cannabis' quasi legal status in California and federally illegal status in the US drive the black market..**

**Federal downsizing of national forest staff and defunding of counties reduce local governance and federal presence and government enforcement capacity.**

**Trespass grows on federal lands contribute to the social, economic and environmental boom town costs borne by remote rural Northern California**

**CBRM respondents clearly differentiate between Cannabis grows on federal public lands and private lands.**

**Respondents who discussed grows on federal land were unanimous in their opposition to trespass or guerilla grows. Most said they believe that federal legalization would undercut the black market and resolve the trespass grows.**



Jesse Dodd/ Mendo Co

## In summary cont.

**Cannabis grown on private land is seen as a crop like other agricultural crops.**

**Respondents feel that grows should be regulated so that the crop is grown on appropriate (agricultural, not forest ) land and water is conserved, use of chemicals is minimized and environmental impacts are addressed.**

**“A regulated market place best way to reduce environmental impacts” (environmental organization respondent)**

**Stronger regulations and taxation will help to reduce the negative social impacts on communities.**

**They hope some of the economic boom Cannabis has brought will stay.**





# How to Crack the Federal Opposition to Legalization?

- **Momentum is growing**
- **CBRM groups are beginning to organize, talk to each other across networks and the region which could be a first step toward an organized response...they have been successful with addressing wicked problems in the past....**
- **They will be one of a number of players – along with states and popular opinion in pushing toward legalization and control over this crop**

# So what?

## What is CBRM?

It is people of place caring for their communities and the land they live in

## Why?

For our children and their children and the children of the future everywhere

## How?

Need all nested levels of governance to step up – in our case the bottom levels are working together well to address the challenge – the feds?

## Why International Landcare?

- To support and learn from each other
- To develop sister relationships
- To focus on issues and share what works or doesn't in different contexts
- Evi – Help with policy relations to higher level government
- Michael – conference focused on consensus building
- Vick: How to make exchanges pay for themselves?



**THERE IS NO SILVER  
BULLET**



A photograph of a massive, ancient-looking tree trunk in a dense forest. The bark is dark, deeply furrowed, and covered in patches of moss. The tree stands in a misty or foggy environment, with other trees visible in the background. In the lower right, a person wearing a backpack and a hat is walking through the undergrowth, which is filled with ferns and other lush vegetation. The overall atmosphere is serene and majestic.

## **Acknowledgements:**

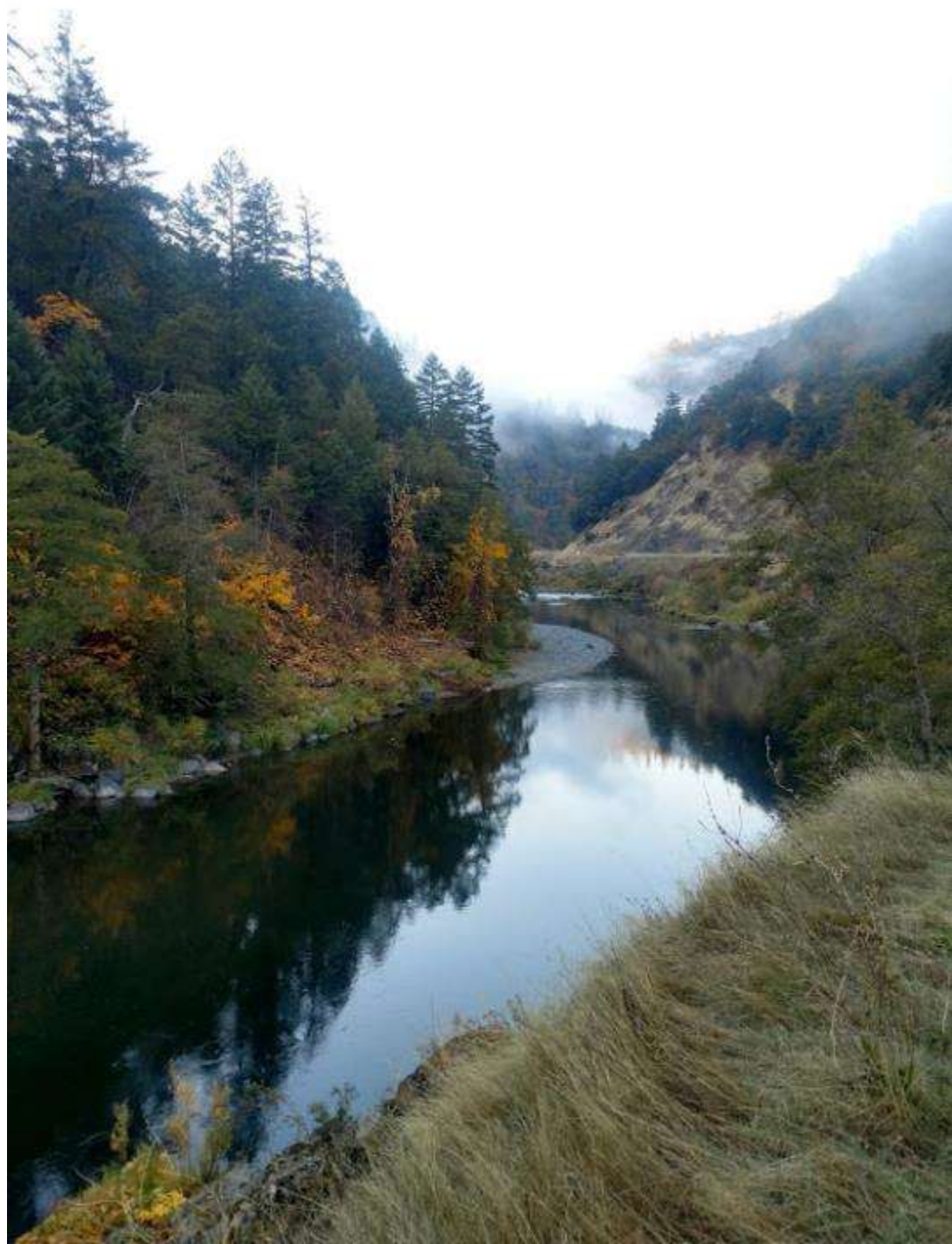
The many people who agreed to speak with me and whose good work continues on

Photo: Sanctuary Forest

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*IN FOCUS: Youth Perspectives on Alcohol & Other Drug Use*

**In the sixties, my father roamed freely, through the lush and alive valleys and hills of Humboldt County, a land holding promises of sovereignty and opportunity for the hippies seeking community.**

Years later, he talks about the Green Rush.

The cannabis industry came to its boom. Benjamins flooded miniscule towns.

My father no longer roams freely.

Towering fences and gates invade the land.

"No trespassing" is posted in entryways, and more and more property is purchased.

By the time I was born, my father warned us: Don't walk too far, neighbors have guns and are protective of their crops.



**Hanna, 9th Grade**  
Six Rivers Charter High School  
Arcata, CA



*IN FOCUS: Youth Perspectives on Alcohol & Other Drug Use*

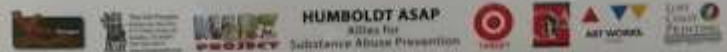
**Eric, Age 16**  
Osprey Learning Center  
Miranda, CA



**This is the Eel River, early in an overdue rainy season. It's not at its peak yet, as you can still see the redwood tree stump in the center of the river.**

What you usually can't see, apart from some floating logs, is the trash and chemicals that pot growers dump into the river. What you also can't see is the water that pot growers have drained from the river. The Eel River is in my backyard. I should not have to pick trash out of it and worry about what's in the water. Both people and wildlife need this water. When the river is low and full of poison we are all affected.

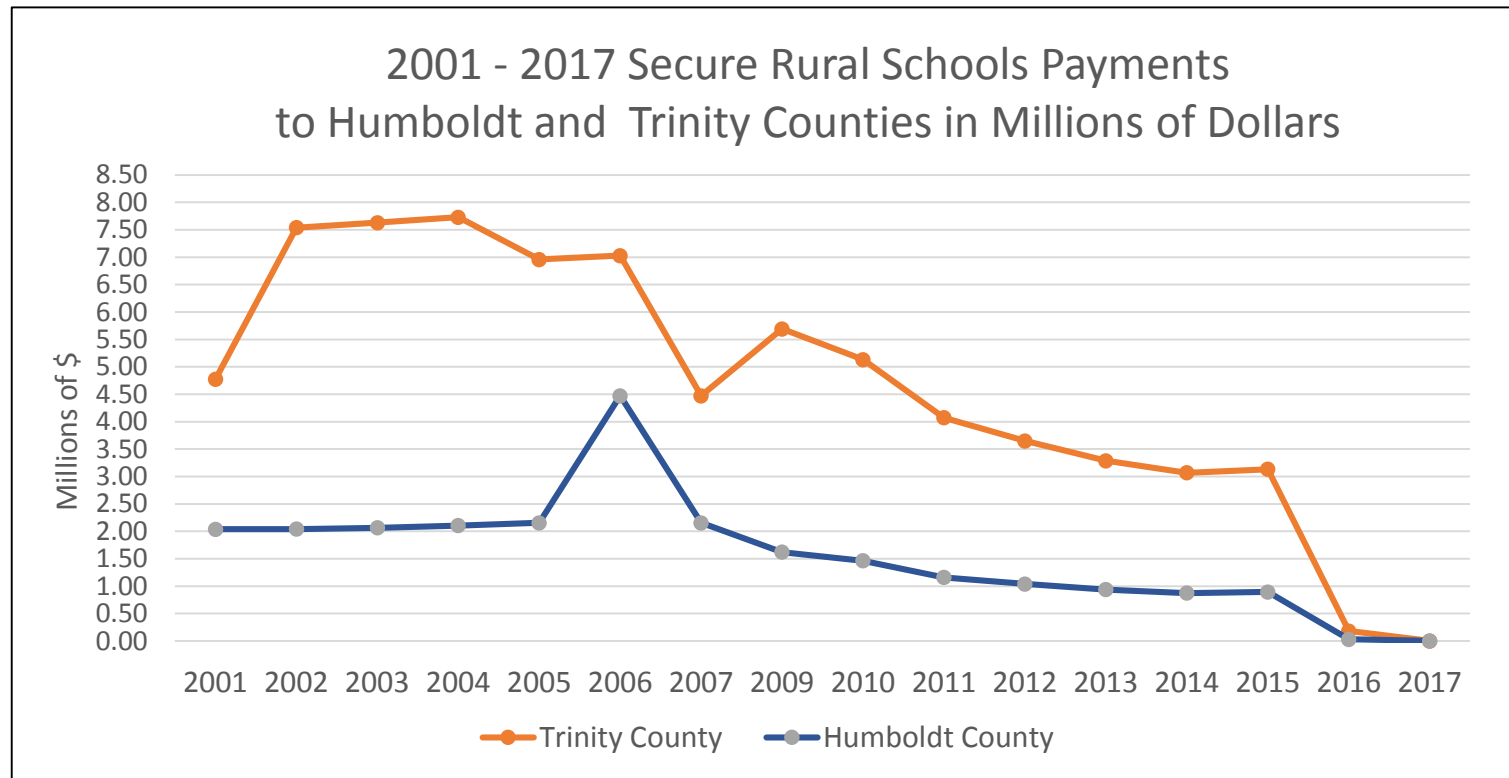
I don't know what we can do about this, but something needs to change!





As Congressional support for Federal Land Management declines, payments to counties with large areas of Federal Public Land decline.

The Secure Rural Schools Act was not reauthorized in 2016.



Data Source: USDA Forest Service. 2017. Secure Rural Schools Payment Reports

<https://www.fs.usda.gov/main/pts/home>