

Regional Markets for Forest Products: Greater Bay Area

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Questions to Consider

- Why do you own your forest land?
- What goods or services do you want to sell?
- How willing are you to invest money now for future benefits?
- Most trees will grow – some will die, but which products will go up or down in value?

Investing in Forestry

- California forest landowners generally want the forestry management to improve the other forest values – different than farming
- Understanding costs and revenues is crucial, even if you want to reinvest everything back into the land
- Cost share programs exist - Federal EQIP is justified on public benefits, State CFIP focuses on delayed private benefits. Both require a forest management plan

What families value about forests

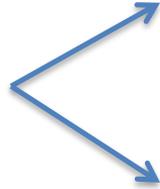
UC typology (2011)	Forest investor	Business family	Gardener family	Inheritor
Butler typology <u>JOE</u> (2007)	Supplemental income	Working the land	Woodland retreat	Ready to sell
Percent of sample respondents	16%	49%	22%	13%
Median size in UC 2011 sample	1260 acres	50 acres	40 acres	35 acres
 Approached to sell	53%	36%	39%	36%
Environmental values	51%	71%	79%	20%
Family and community values	16%	58%	56%	26%
Financial values	50%	45%	23%	27%

$\frac{3}{4}$ of owners of medium and large forest holdings are active and/or inquisitive across the spectrum

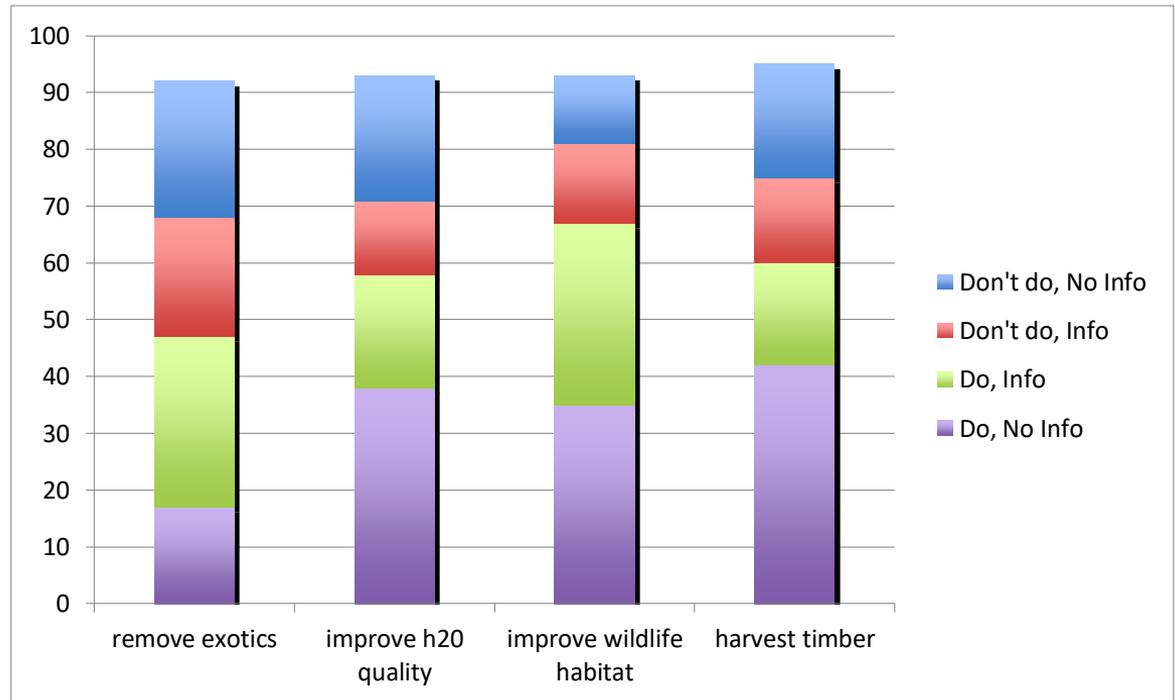
Couch potatoes



Inquisitive



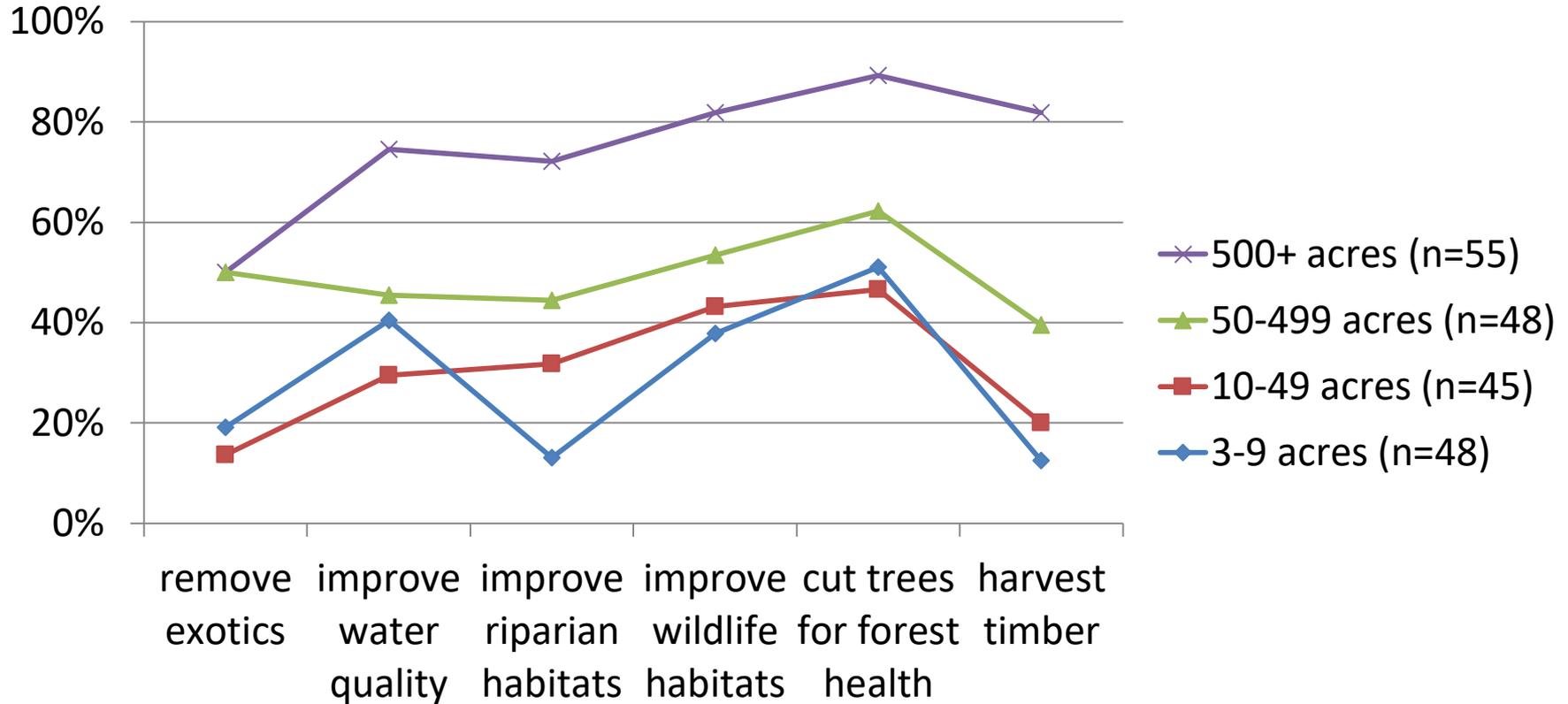
Independent



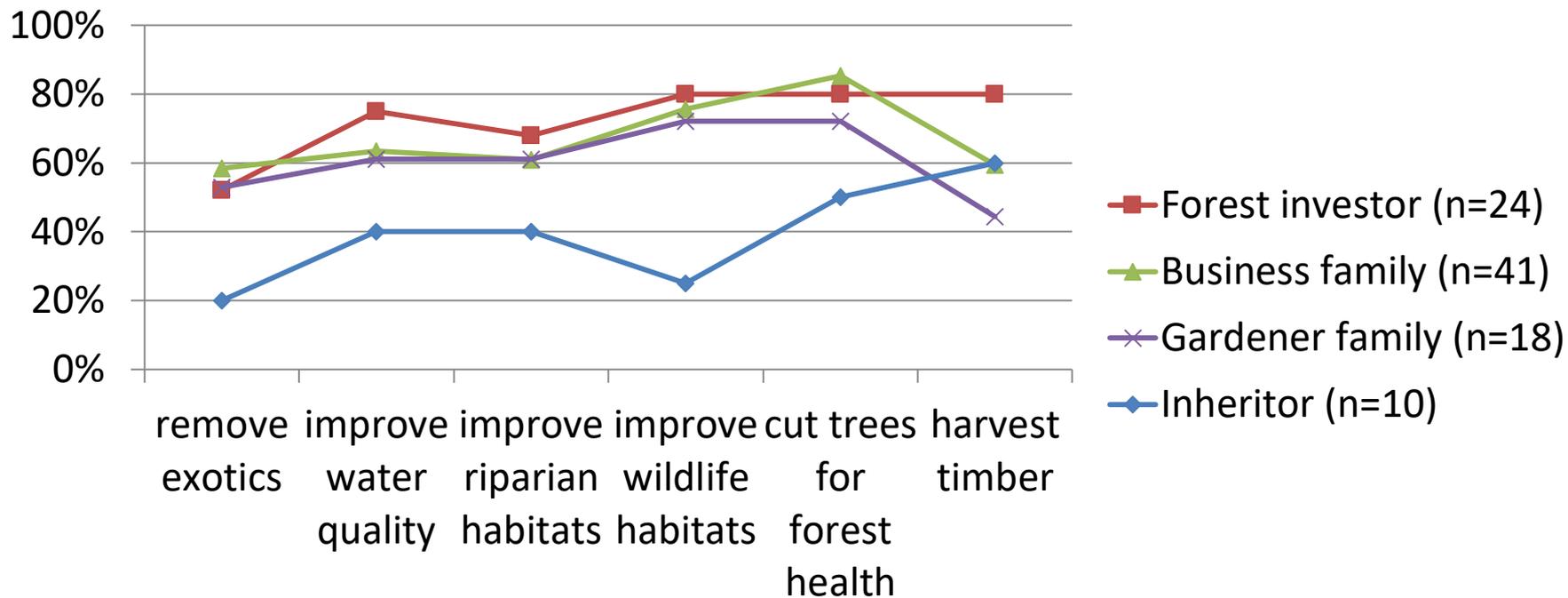
Low Net Cost Forest Management Options

- Forest management as exercise (brush clearing)
- Commercial thin timber harvests – leave a better tree diameter distribution for better net growth via THP or NTMP or Working Forest Management Plan (WFMP)
- ‘Nearly break-even’ timber harvests – investment in a much better tree diameter distribution and future value
- ‘No revenue’ harvest – eligible for EQIP or CFIP
- Access state or federal cost share programs

Size drives timber management activities - the 80/40/20/10 rule

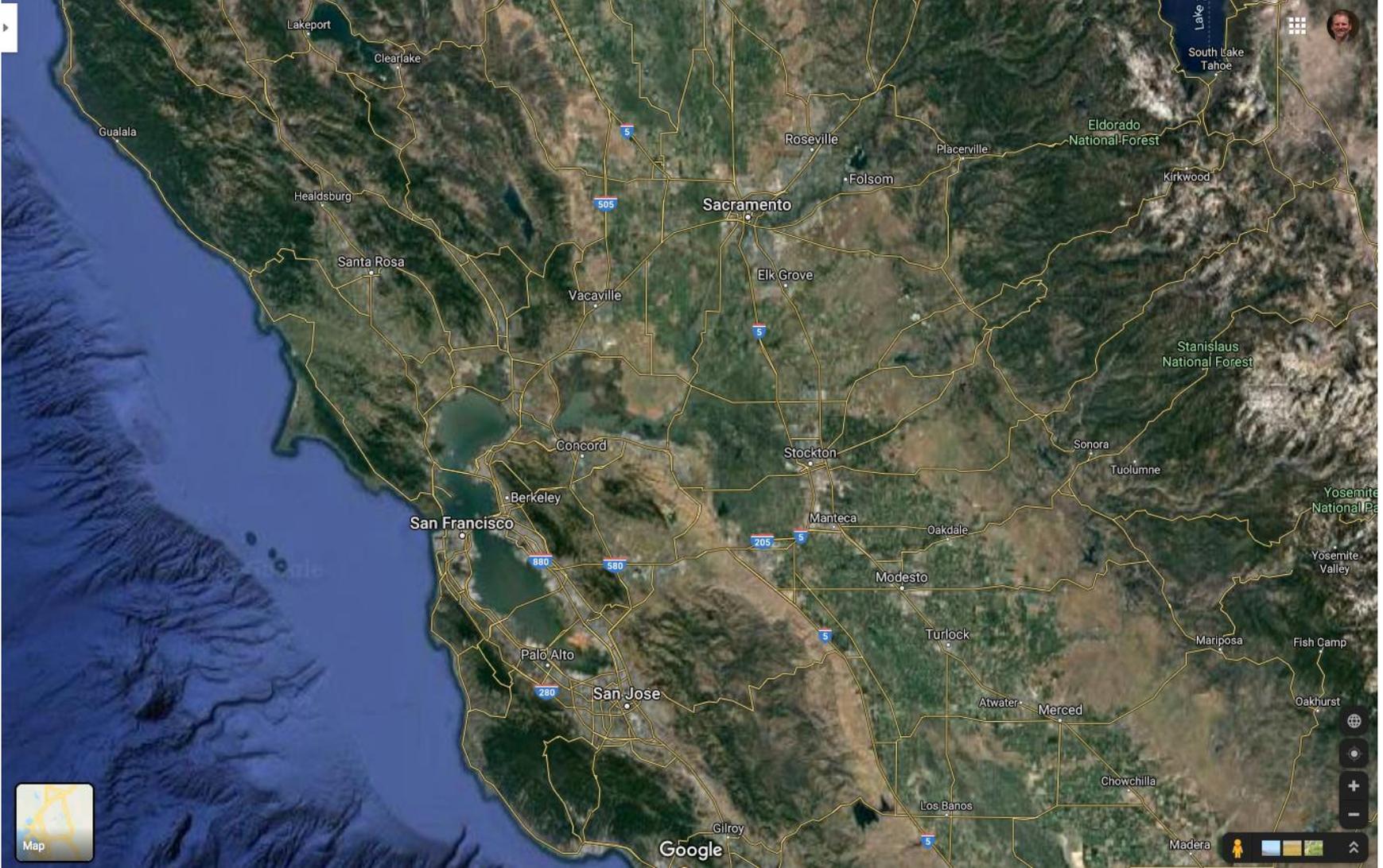


Value based clusters are similar for larger holdings (> 50 acres)



Necessary Steps to get Timber Revenue in California

- Timber harvest/reforestation is the one action that can generate significant revenue without selling or long term leasing.
- Need a sawmill to buy (here or overseas)
- Need a forester to plan, get permits, and manage
- Need a licensed timber operator (LTO) to actually cut the trees and move the logs
- May need a reforestation forester and pest control adviser (PCA) to ensure successful reforestation



Lakeport

Clearlake

Gualala

Healdsburg

Santa Rosa

Vacaville

Sacramento

Roseville

Folsom

Placerville

Eldorado National Forest

South Lake Tahoe

Kirkwood

Elk Grove

Stanislaus National Forest

Concord

Stockton

Sonora

Tuolumne

San Francisco

Berkeley

Manteca

Oakdale

Yosemite National Park

Yosemite Valley

880

580

205

Modesto

Palo Alto

San Jose

Turlock

Mariposa

Fish Camp

280

Atwater

Merced

Oakhurst

Gilroy

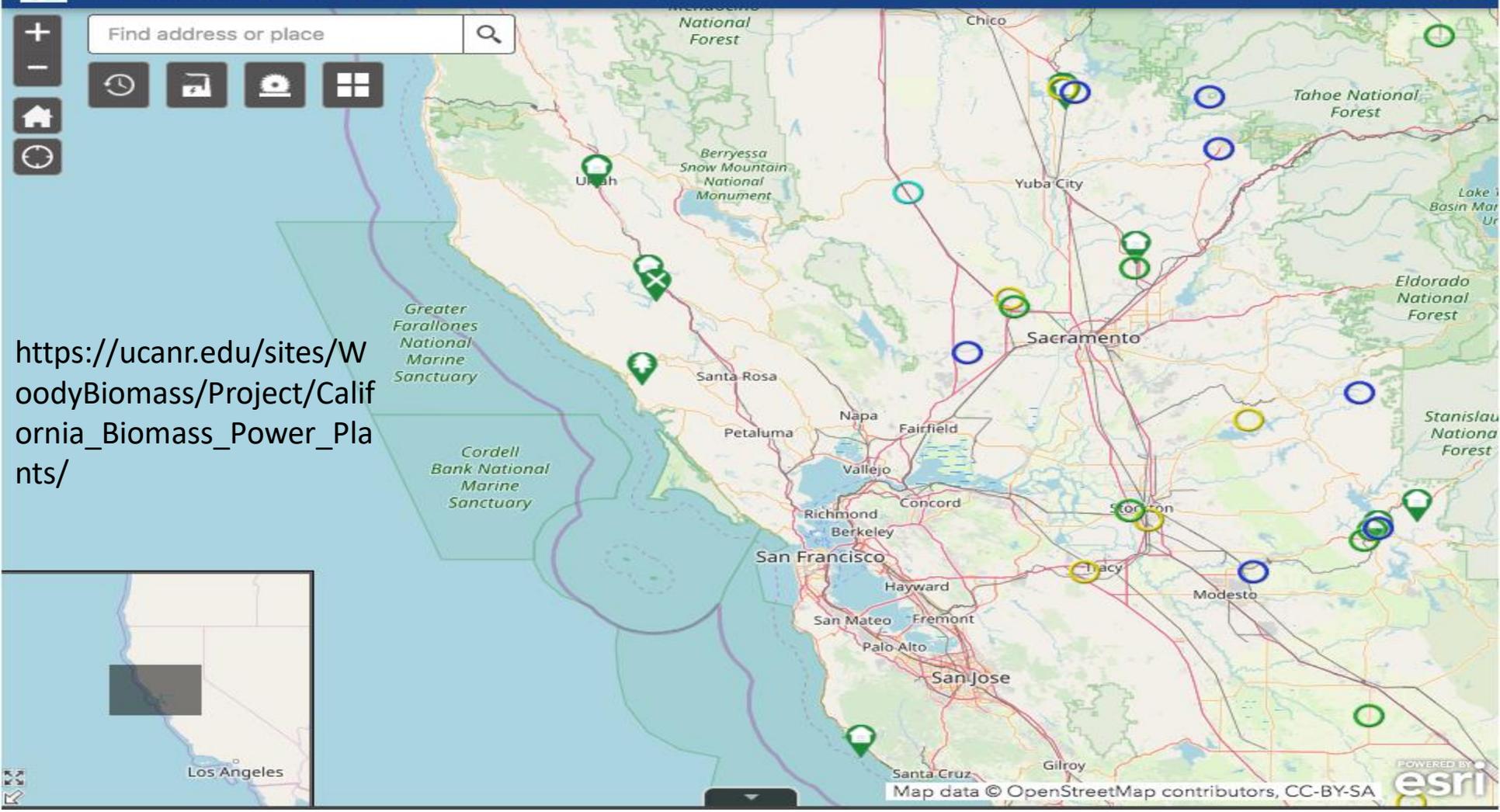
Los Banos

Chowchilla

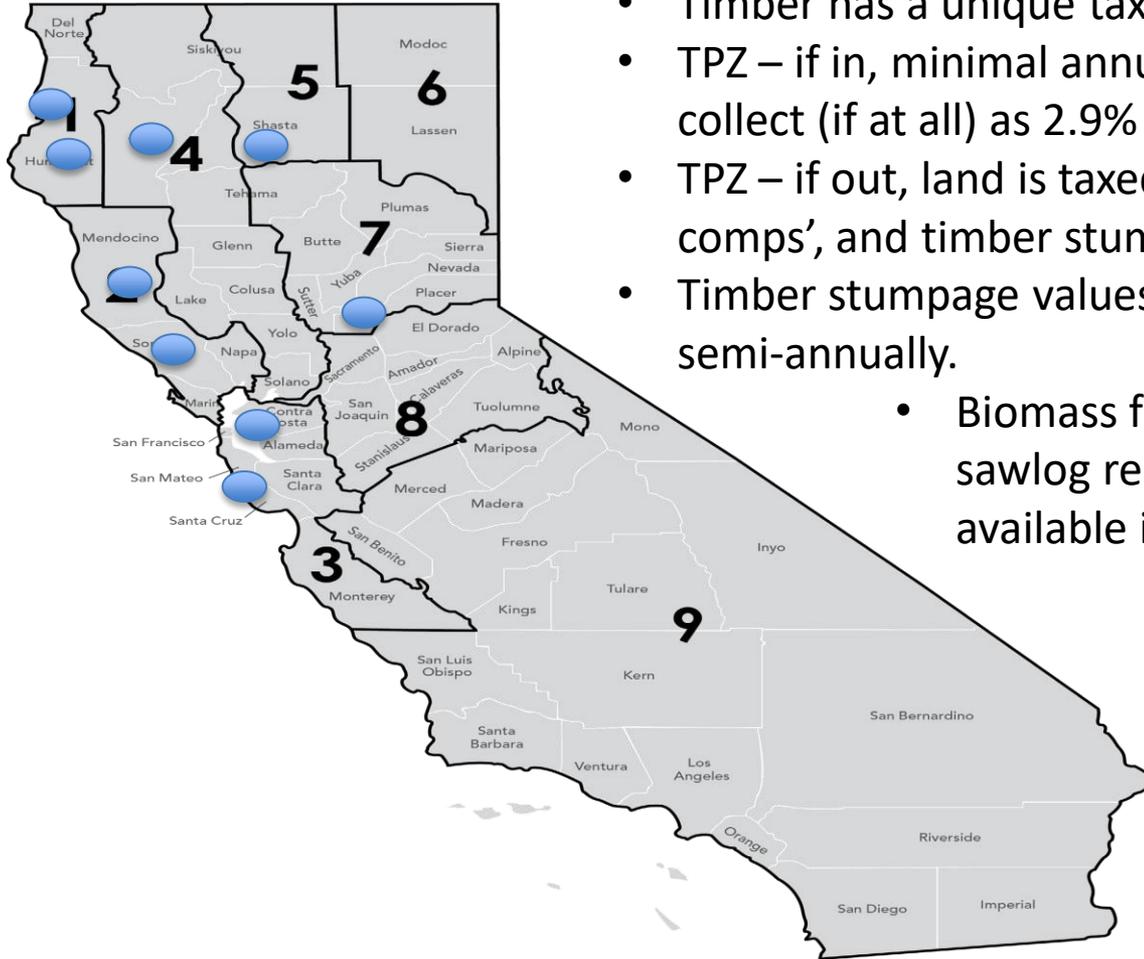
Madera

Google





https://ucanr.edu/sites/WooddyBiomass/Project/California_Biomass_Power_Plants/

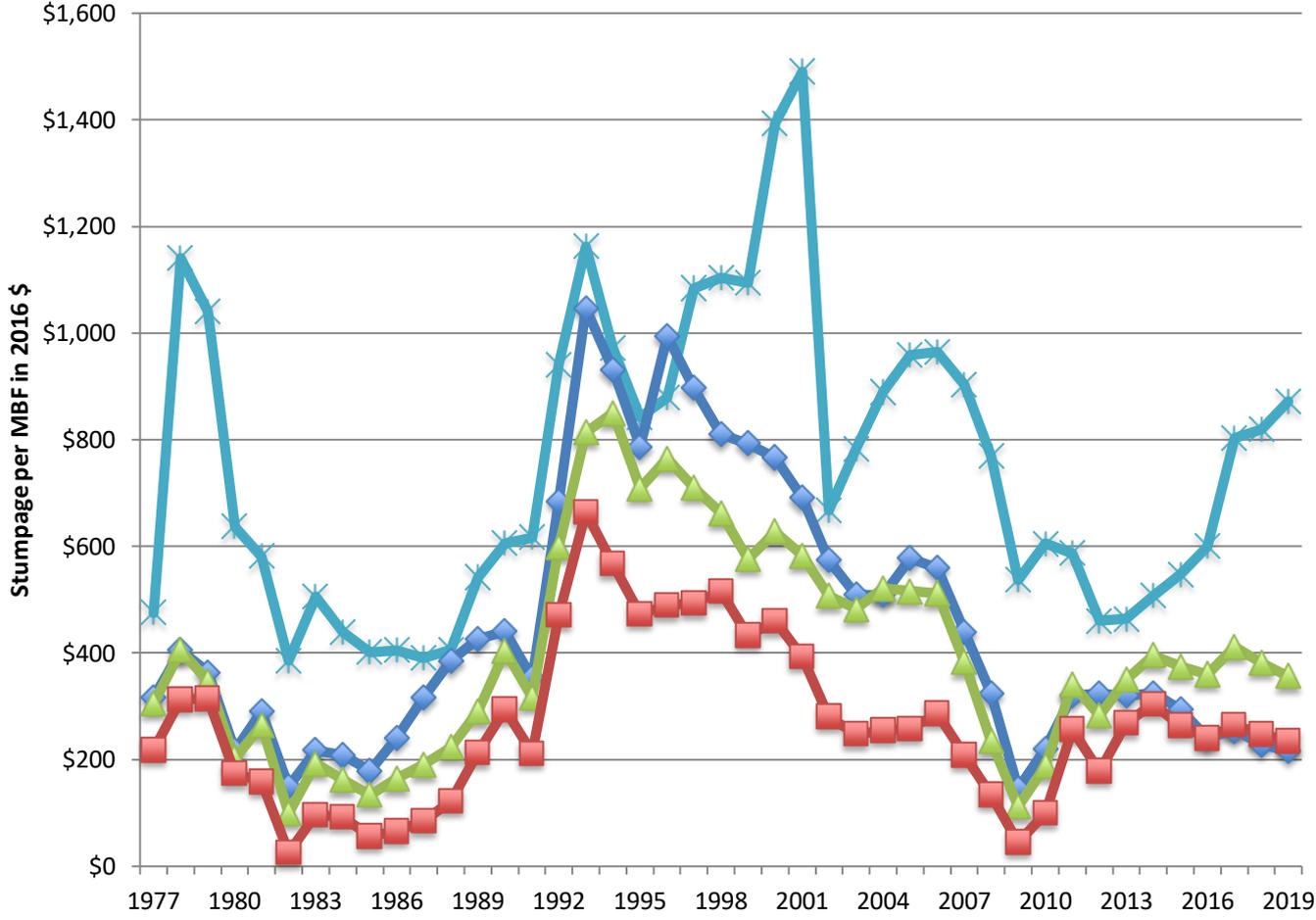


- Timber has a unique tax structure in California.
- TPZ – if in, minimal annual tax on land, with most tax collect (if at all) as 2.9% of stumpage value.
- TPZ – if out, land is taxed comparable to ‘market comps’, and timber stumpage is taxed at 2.9% of value.
- Timber stumpage values are estimated and published semi-annually.

- Biomass facilities that purchase less than sawlog redwoods are not available in the Bay Area

● Select Sawmill or Export Facilities in Northern California

Timber Prices are Volatile



- Redwood (Humboldt)
- Ponderosa pine
- Douglas-fir
- True Fir

Calculated from California stumpage prices

Stumpage Price Values by Region

(1 Humboldt, 2 Mendocino/Sonoma, 3 SF Bay Area)

TABLE G – GREEN TIMBER HARVEST VALUES - This table shows the harvest values for timber by species, size, and timber value area. The taxpayer makes the adjustments for the logging system, for small total volume on the harvest operation, and low volume per acre on the harvest operation.

Low
values in
region 3

GREEN TIMBER Tractor Logging (Logging Code T)

SPECIES	SPECIES CODE	VOLUME PER LOG	SIZE CODE	TIMBER VALUE AREA								
				1	2	3	4	5	6	7	8	9
		Over 300	1	160	160	60	140	250	220	240	190	140
Ponderosa Pine	PPG	150-300	2	120	150	50	120	230	200	200	170	120
		Under 150	3	80	90	30	100	210	180	190	160	110
Hem/fir	FG	N/A	N/A	120	60	N/A	150	240	180	210	140	100
		Over 300	1	260	240	60	280	390	220	350	320	N/A
Douglas-fir	DFG	150-300	2	250	210	50	270	380	210	330	300	N/A
		Under 150	3	240	200	30	260	370	200	310	290	N/A
Incense Cedar	ICG	N/A	N/A	100	130	N/A	260	350	320	370	330	160
		Over 300	1	950	1000	960	N/A	N/A	N/A	N/A	N/A	N/A
Redwood	RG	150-300	2	930	880	820	N/A	N/A	N/A	N/A	N/A	N/A
		Under 150	3	830	830	780	N/A	N/A	N/A	N/A	N/A	N/A
Port-Orford Cedar	PCG	Over 125	1	300	N/A	N/A	300	N/A	N/A	N/A	N/A	N/A
		125 & Under	2	200	N/A	N/A	200	N/A	N/A	N/A	N/A	N/A

Source: ([California Department of Tax and Fee Administration 2019](https://www.cdtfa.ca.gov/taxes-and-fees/timber-tax.htm))

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Fire Damage Logs are Cheaper

SALVAGE TIMBER
Tractor Logging (Logging Code T)

SPECIES	SPECIES CODE	VOLUME PER LOG	TIMBER VALUE AREA									
			SIZE CODE	1	2	3	4	5	6	7	8	9
		Over 300	1	70	70	30	60	110	100	110	90	60
Ponderosa Pine	PPS	150-300	2	50	60	20	50	100	90	90	80	50
		Under 150	3	40	40	10	40	90	80	80	70	40
Hem/fir	FS	N/A	N/A	70	40	N/A	100	140	110	130	80	60
		Over 300	1	160	140	40	180	240	140	210	190	N/A
Douglas-fir	DFS	150-300	2	150	130	30	170	230	130	200	180	N/A
		Under 150	3	140	120	20	160	220	120	190	170	N/A
Incense Cedar	ICS	N/A	N/A	60	80	N/A	180	210	190	220	200	100
		Over 300	1	710	750	720	N/A	N/A	N/A	N/A	N/A	N/A
Redwood	RS	150-300	2	700	660	620	N/A	N/A	N/A	N/A	N/A	N/A
		Under 150	3	620	620	580	N/A	N/A	N/A	N/A	N/A	N/A
Port-Orford Cedar	PCS	Over 125	1	220	N/A	N/A	220	N/A	N/A	N/A	N/A	N/A
		125 & Under	2	150	N/A	N/A	150	N/A	N/A	N/A	N/A	N/A

Source: ([California Department of Tax and Fee Administration 2019](https://www.cdtfa.ca.gov/taxes-and-fees/timber-tax.htm))
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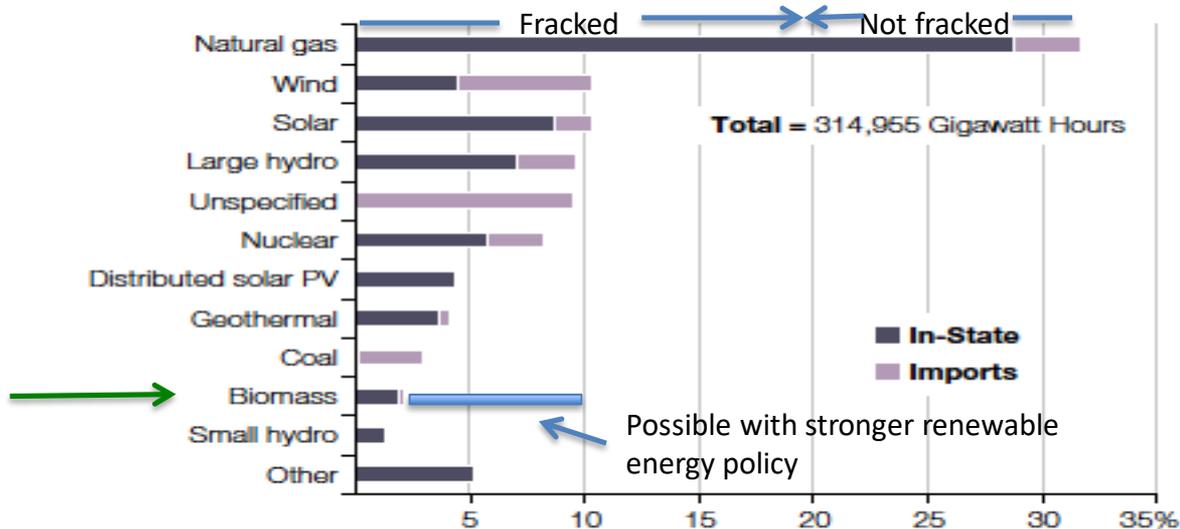
Insights from regional stumpage prices

- Redwood stumpage is fairly high and consistent across all coastal counties
- Douglas-fir stumpage south of Carquinez Strait plummets due to lack of local non-redwood mills
- Big log premium is only very significant for Ponderosa Pine
- Fire reduces stumpage value compared to green timber
 - 43% (pine), 61% (Douglas-fir), 74% (Redwood)

Woody Biomass for Energy Markets in California

Figure 2

Electricity Generated From a Wide Variety of Sources Percent of Total Generation, 2018



PV – photovoltaic.

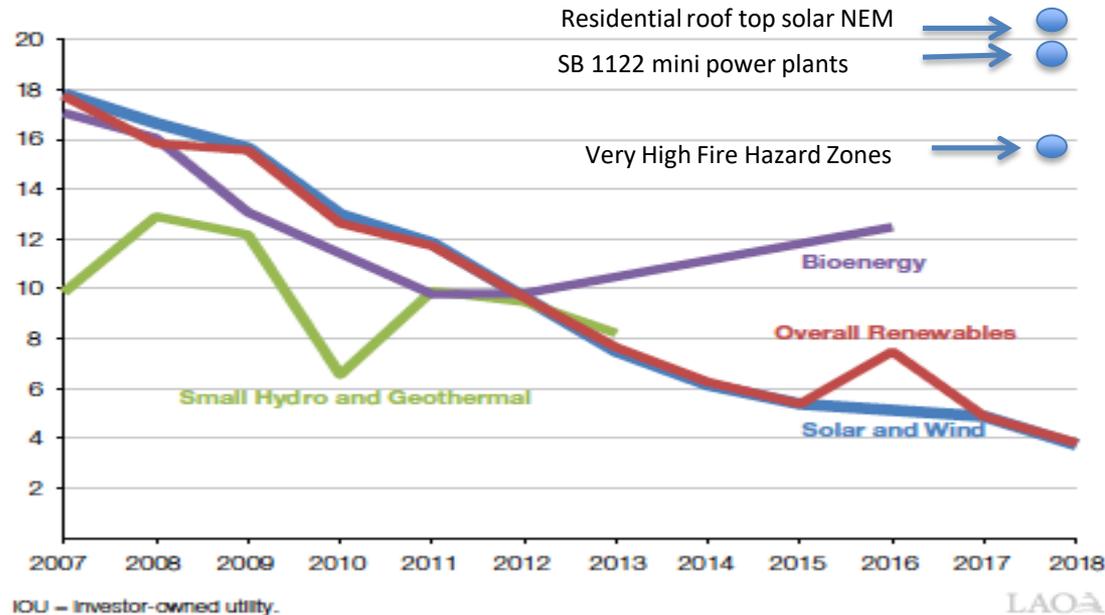
LAOA

- Biomass electricity is currently a small player in electricity in California
- Urban forests produce considerable amounts of green waste
- Biomass has been central to replacing coal in Europe.
- Biomass could replace all the coal and some of the ~2/3 of natural gas we use that comes from fracking wells – mainly out of state.
- LAO 2020 report

Scale matters more than technology type for renewable energy

Figure 11

**Prices for New IOU Renewable Contracts
Declined Substantially**
Cents Per Kilowatt Hour



- Baseload renewables are more expensive than episodic industrial renewables
- “Mix of Policies Likely Not Most Cost-Effective Way to Reduce GHGs” in *Assessing California’s Climate Policies—Electricity Generation* LAO (2020)
- The Bay Area has the biomass feedstock for more than one industrial scale bioenergy plant, but no current plans to build a state-of-the-art plant

From a landowners perspective

- Timber markets are thin and volatile
- Redwood is a very unique and valuable product
- The Asian export market out of the Port of Oakland can be very competitive for Bay Area owners if they are buying
- There are high costs per permit in the Bay Area, so economies of scale, or piggybacking on neighbor's harvests, help
- Around 1/3 of the total log volume is in trees too small to sell as sawlogs, but there are few biomass plants that purchase small logs - even though the Bay Area produces a lot of biomass that could be used to generate electricity at rates cheaper than rooftop solar
- Owning a square mile of old growth redwood fetches good money, \$ 10 million or \$17,000/acre from Save the Redwoods (SFChron 1/31/20), but few of us are so lucky