

Meeting Conservation Goals

Costs and Benefits to Northcoast Landowners

By

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Overview of Presentation

- ISF Mission
- Conservation Goals to Consider
- Forestland Conditions in Del Norte, Humboldt, Mendocino and Trinity Counties
- Sera Stage (Wildlife Habitat Benefits)
- Wildfire Resiliency Benefits
- Carbon Benefits
- Past Present and Future Log Price Trends in Area
- Costs and Benefits of Delayed Harvest in Even-aged Management
- Costs and Benefits of Delayed Harvest in Uneven-aged Management



ISF Mission

“To promote sustainable forest management that contributes to the long-term ecological, economic and social well-being of forest based communities in the Pacific Northwest.”



Conservation Goals to Consider



Proposed Conservation Goals

- Increase age of harvested trees to improve monetary benefits
- Increase age of stands to improve seral stage/wildlife benefits
- Delay final harvests to improve CO2 monetary values and sequester more CO2
- Delay final harvests to improve wildland fire resiliency

Data for For Conservation Goals

Used USFS FIA Plots Measured Between
2001-2005 on Private Lands Only to Model
Redwood, Douglas-fir and Hardwood
Challenged Douglas fir Stands

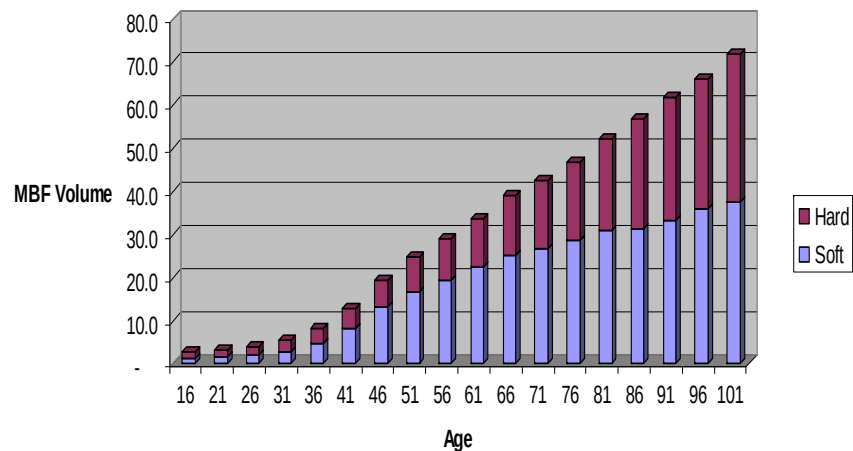
Number of FIA Plots Used					
Vegetation Type	Age Class of Plots				
	0-25	25-50	50-75	75-100	100+
Redwood	4	11	6	8	6
Douglas-fir	6	18	15	8	5
Dfir-Tanoak	7	50	16	7	5



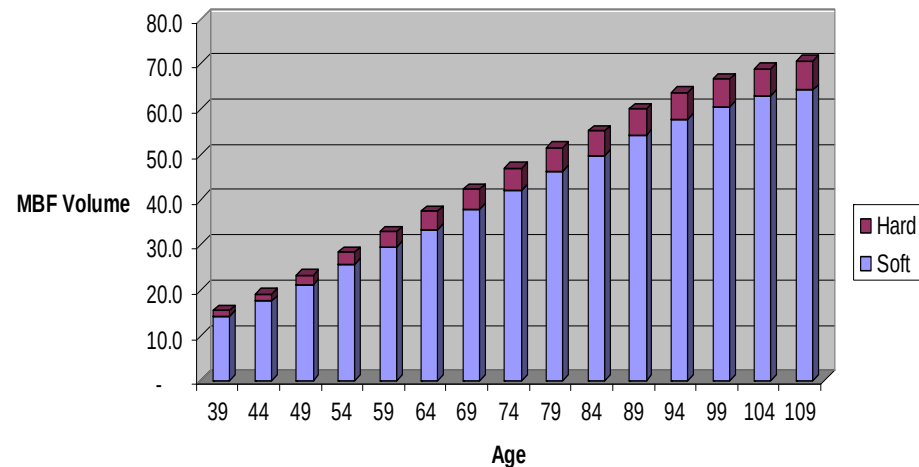
Forestland Conditions

Stand Conditions Projected Through Time

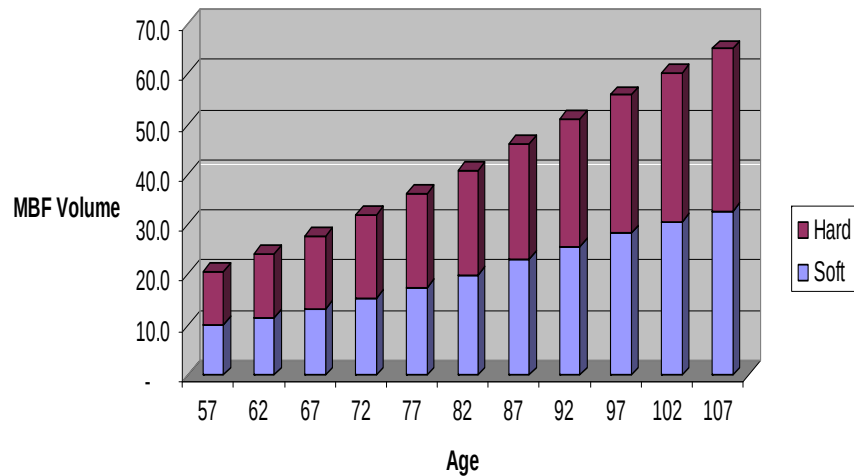
DF Stands 0-25 Years Old Today



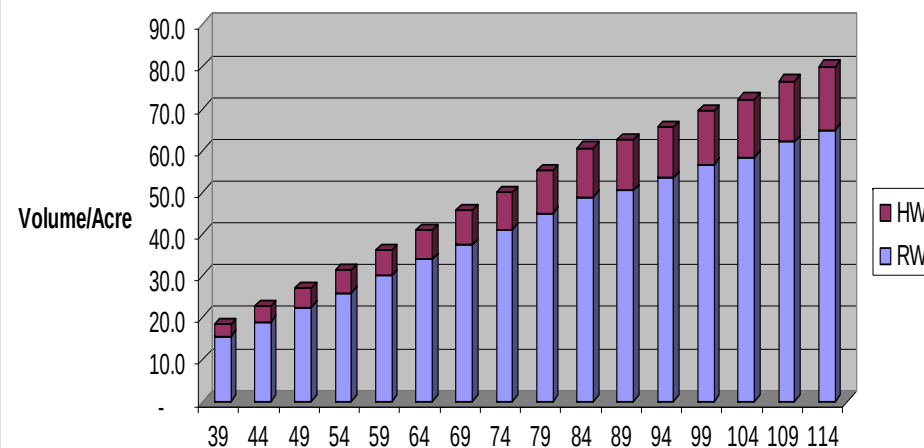
Df Stands 25-50 Years Old Today



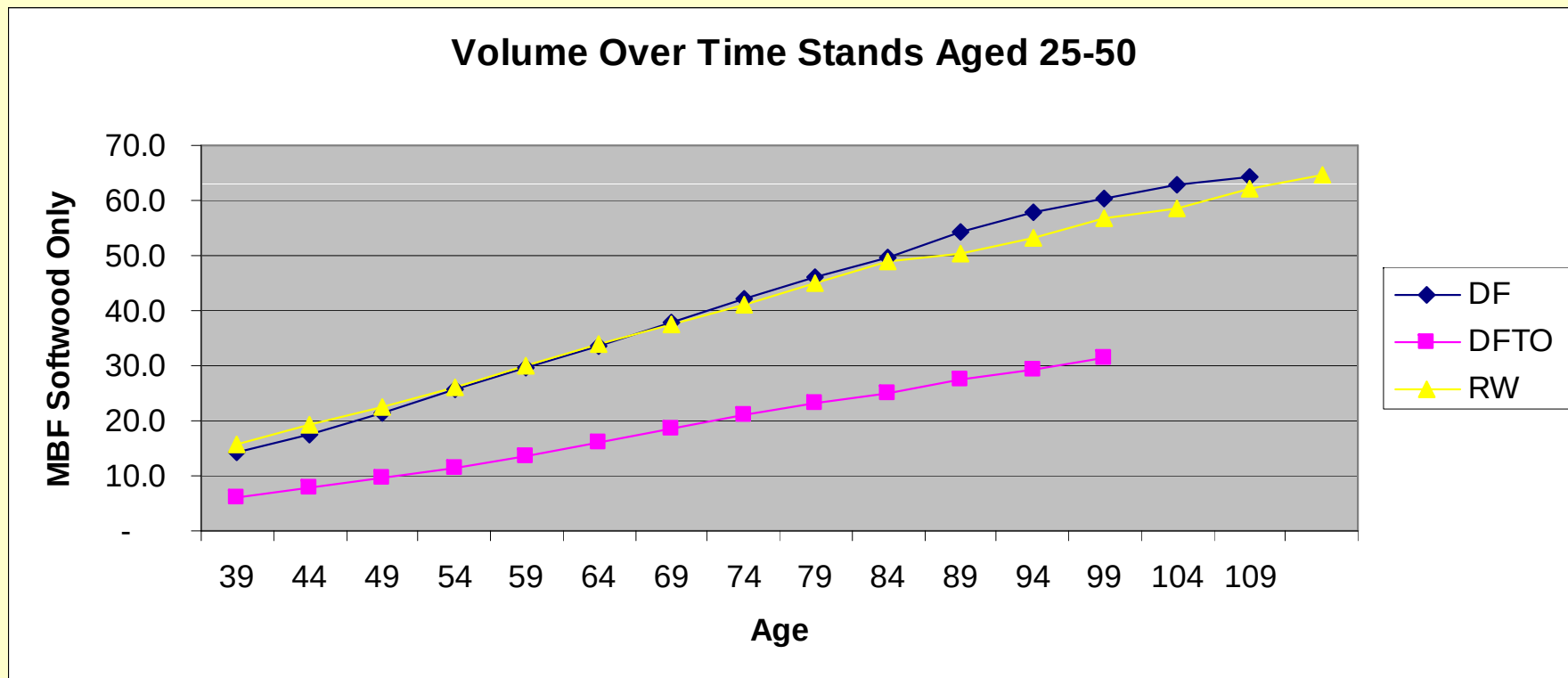
DF/TO Stands 50-75 Years Old Today



Redwood Stands Ages 25-50



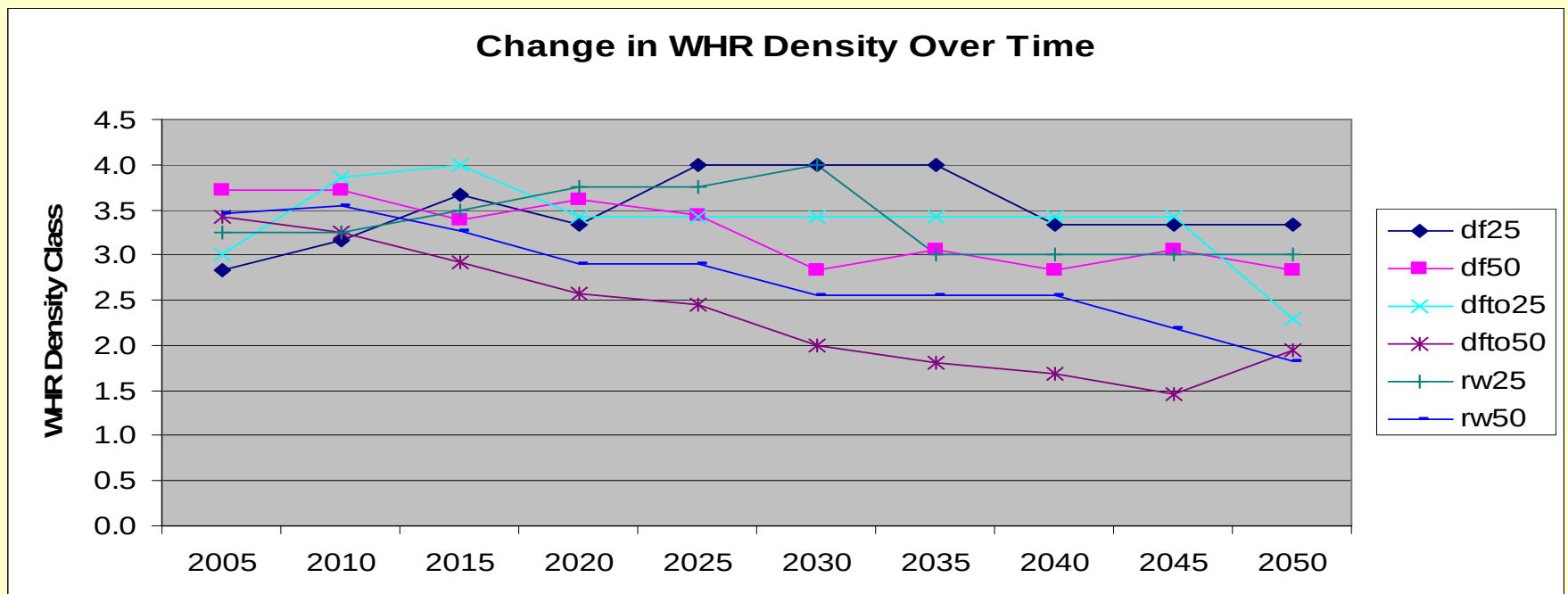
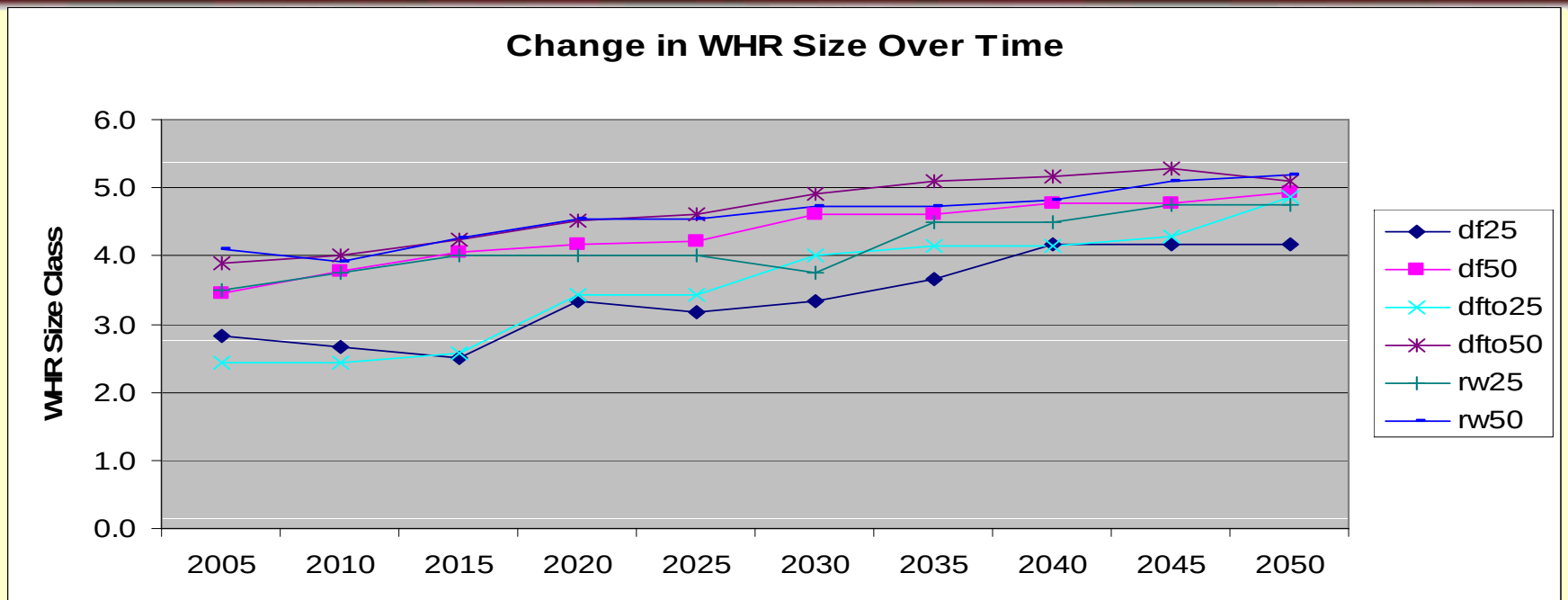
Stand Conditions Projected Through Time





Seral Stage Benefits to Delaying Harvest

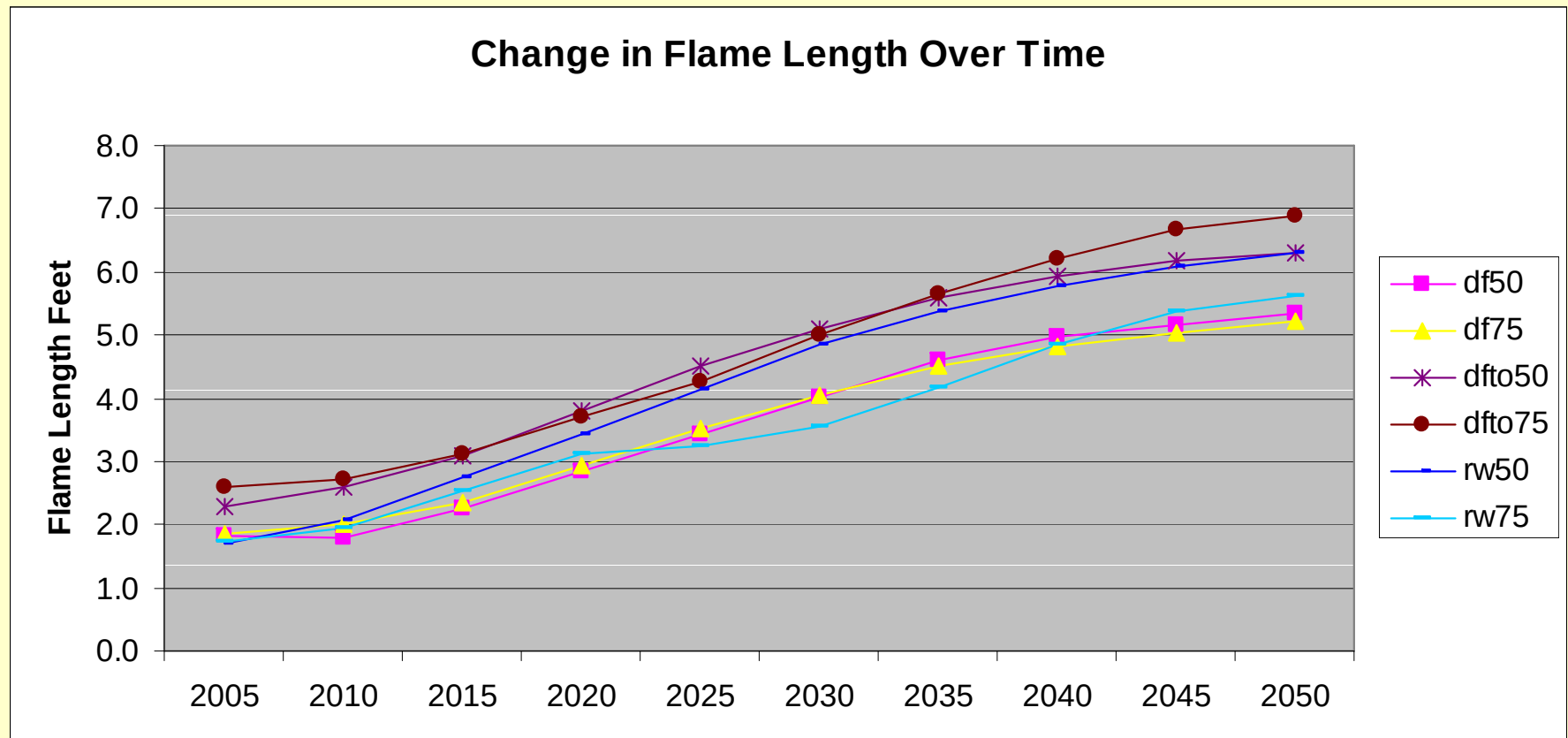
Wildlife Habitat Over Time



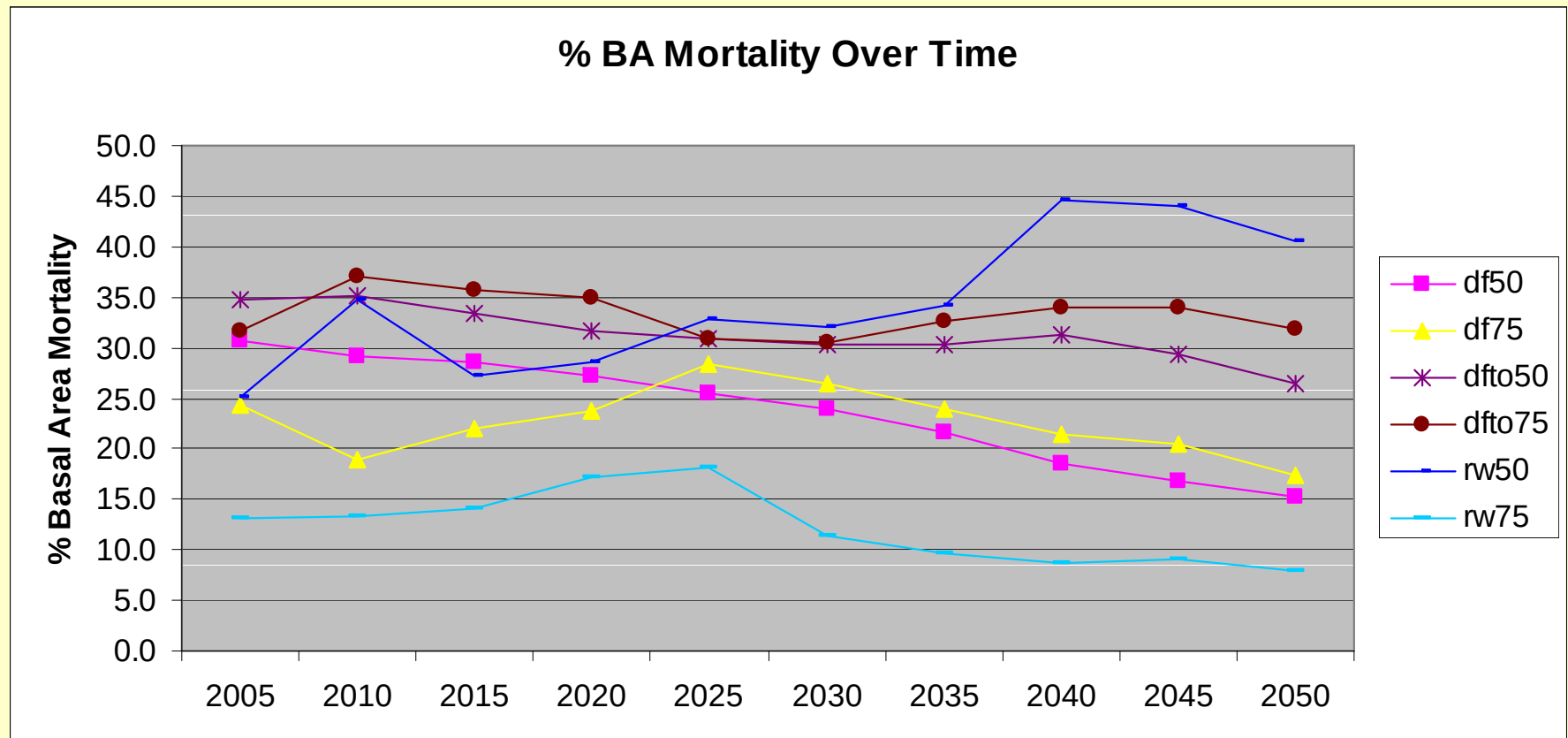


Wildfire Resiliency Benefits As Stands Get Older

Wildfire Resiliency

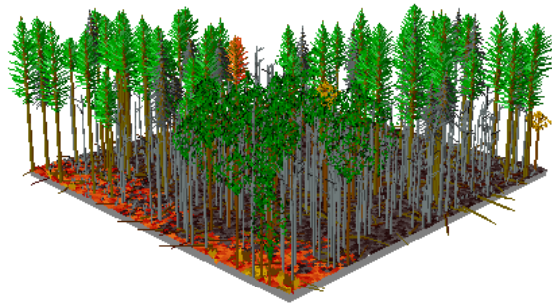


Wildfire Resiliency

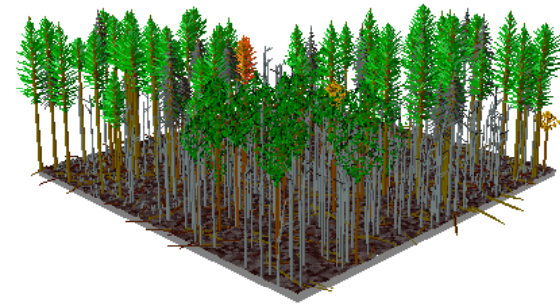


Wildfire Resiliency

Stand=0620050102386054 Year=2005 During the fire (02/03)



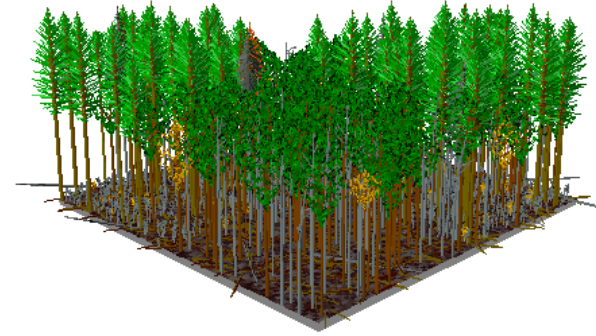
Stand=0620050102386054 Year=2005 After the fire (03/03)



Stand=0620050102386054 Year=2025 During the fire (02/03)



Stand=0620050102386054 Year=2025 After the fire (03/03)





Carbon Benefits to Delaying Harvest

Carbon Sales From 120 Acre Parcel Over Time

Periodic (Every 5 Years) Carbon Sales In Thousands
of Dollars at \$12/ton

	DF		DFTO		RW	
	43	61	43	61	43	63
2010	\$ 13.7	\$ 11.1	\$ 15.0	\$ 13.5	\$ 14.2	\$ 12.0
2015	\$ 12.2	\$ 9.5	\$ 14.3	\$ 13.1	\$ 12.5	\$ 12.6
2020	\$ 13.2	\$ 8.4	\$ 14.3	\$ 12.5	\$ 10.7	\$ 13.2
2025	\$ 9.8	\$ 8.5	\$ 13.3	\$ 12.3	\$ 9.5	\$ 12.4
2030	\$ 7.9	\$ 7.0	\$ 12.4	\$ 10.4	\$ 8.3	\$ 8.6
2035	\$ 8.3	\$ 6.1	\$ 10.3	\$ 9.7	\$ 8.2	\$ 6.3
2040	\$ 7.4	\$ 5.8	\$ 10.4	\$ 9.3	\$ 7.6	\$ 4.0
2045	\$ 6.1	\$ 7.4	\$ 8.9	\$ 9.2	\$ 8.9	\$ 8.0
2050	\$ 3.3	\$ 5.3	\$ 9.4	\$ 6.8	\$ 8.5	\$ 0.6



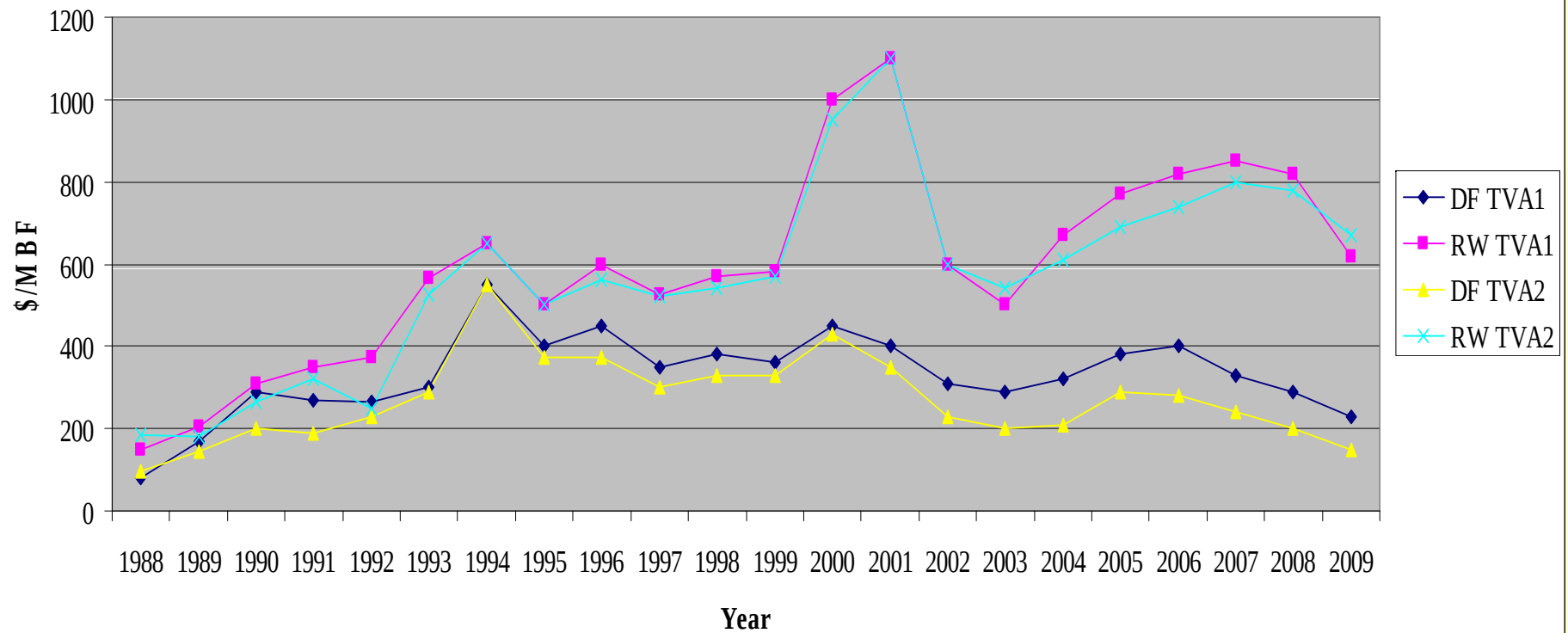
Costs and Benefits of Managing for Older Stands and Older/Larger Trees



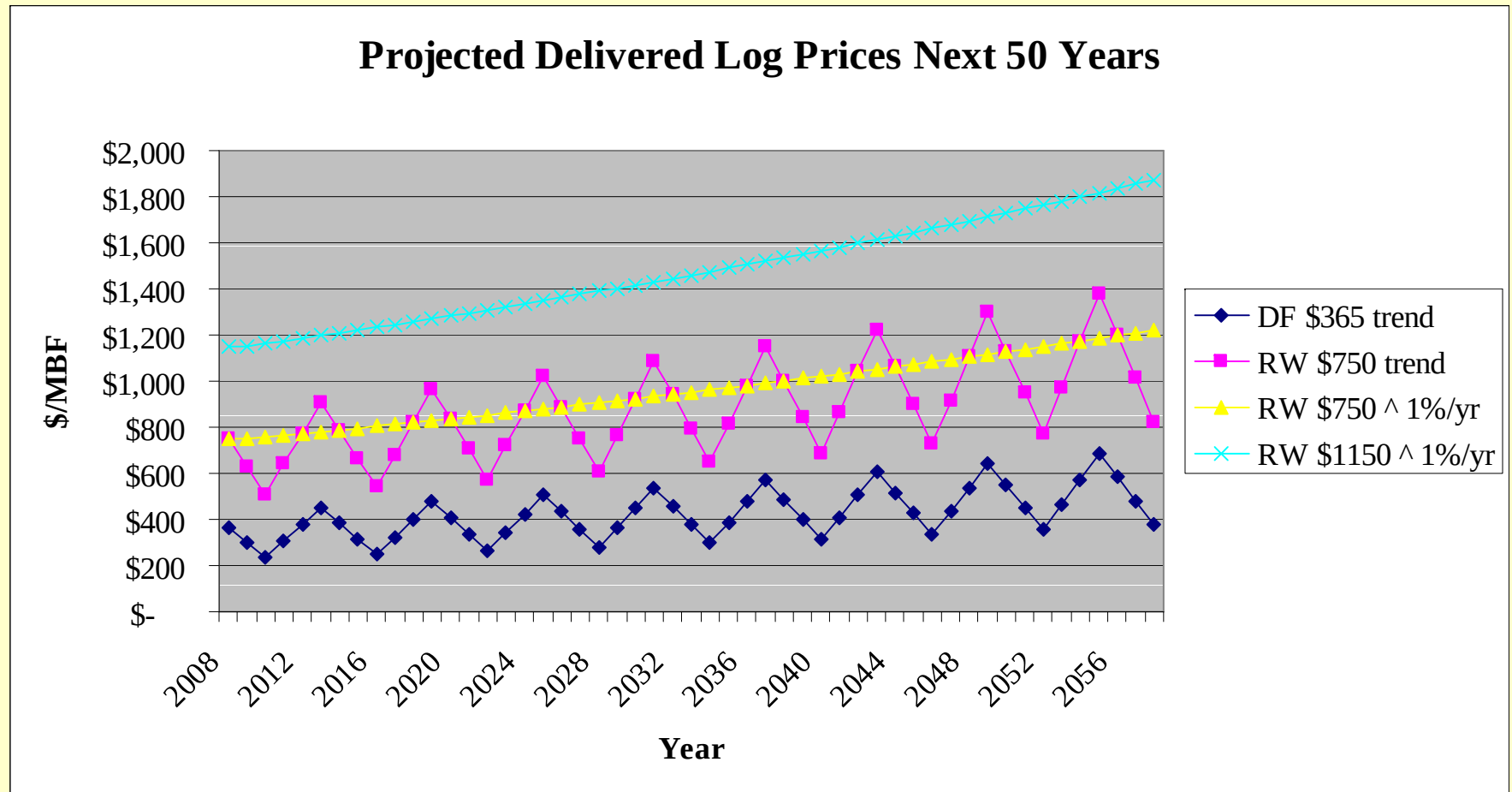
Past, Present and Future Price Trends

Past Price Trend

BOE Stumpage Values Humboldt, Del Norte (TVA1), Mendocino, Sonoma (TVA2)



Future Price Trend





Monetary Costs/Benefits to Delaying Evenaged Harvest

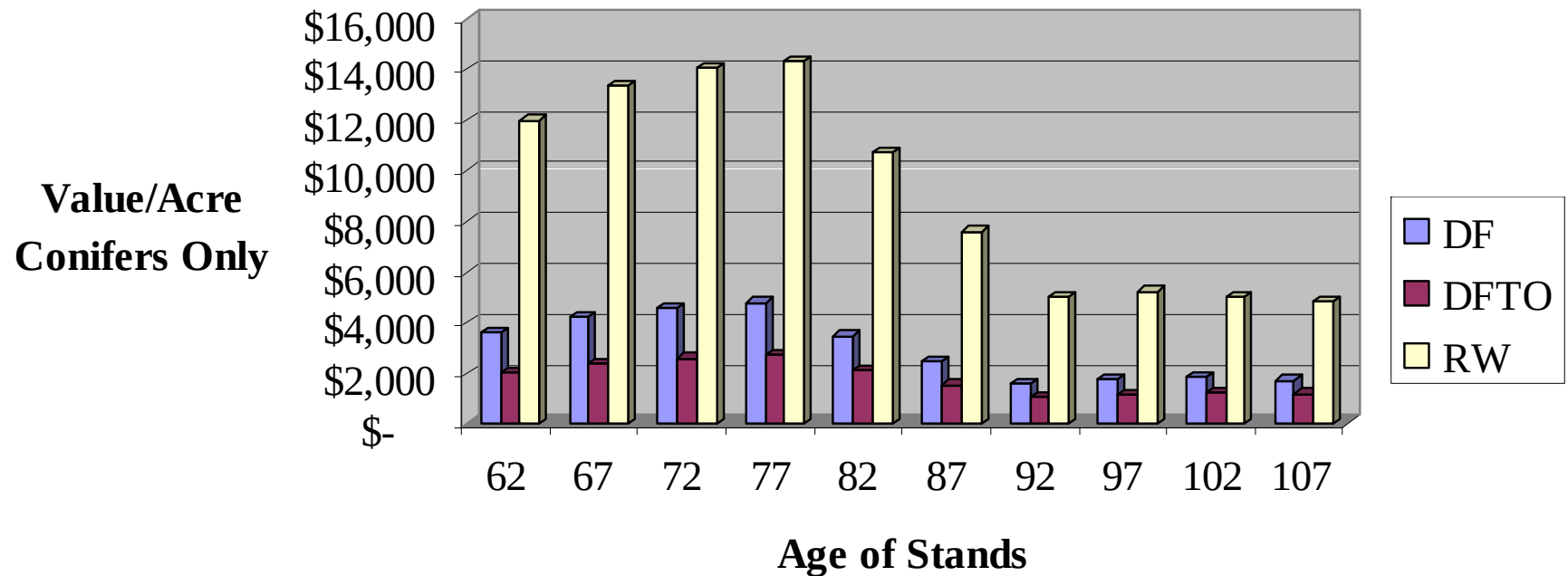
Monetary Costs/Benefits to Delaying Even-aged Harvest

Year	Age	Yrs Into Future	DF Not Challenged		DF TO Challenged		Redwood	
			MBF Con	Dis Rev 6%	MBF Con	Dis Rev 6%	MBF Con	Dis Rev 6%
2010	62	0	20.8	\$ 3,632	11.6	\$ 2,033	36.4	\$ 11,993
2015	67	5	24.0	\$ 4,249	13.4	\$ 2,362	41.4	\$ 13,368
2020	72	10	27.1	\$ 4,598	15.4	\$ 2,616	46.1	\$ 14,028
2025	77	15	30.3	\$ 4,789	17.5	\$ 2,759	51.4	\$ 14,324
2030	82	20	33.3	\$ 3,486	20.0	\$ 2,092	57.2	\$ 10,734
2035	87	25	36.3	\$ 2,445	23.1	\$ 1,551	61.9	\$ 7,605
2040	92	30	39.6	\$ 1,624	25.7	\$ 1,053	65.0	\$ 5,023
2045	97	35	42.9	\$ 1,782	28.3	\$ 1,173	69.2	\$ 5,247
2050	102	40	46.0	\$ 1,834	30.5	\$ 1,218	70.6	\$ 5,043
2055	107	45	46.9	\$ 1,737	32.6	\$ 1,208	74.3	\$ 4,862

	Cost to Wait		Cost to Wait		Cost to Wait
Wait 5 yrs	\$ (540)		\$ (397)		\$ (956)
Wait 10 yrs	\$ (191)		\$ (143)		\$ (296)
Wait 15 yrs	\$ -		\$ -		\$ -
Wait 20 yrs	\$ (1,304)		\$ (667)		\$ (3,590)
Wait 30 yrs	\$ (3,166)		\$ (1,707)		\$ (9,301)

Trend in Discounted Cash Flow

Discounted Cash Flow of Conifer Clearcut Harvests



Harvest Volume From Even-aged and Uneven-aged Harvests

Year	CC Every 50 Yrs			Uneven Aged		
	DF	DFTO	RW	DF	DFTO	RW
2010	20.7	11.6	36.4	3.3	1.6	9.2
2015						
2020						
2025						
2030				3.3	2.6	9.3
2035						
2040						
2045						
2050				6.7	3.9	13.8
2055						
2060	17.4	17.4	31.6			
2065						
2070				6.7	4.1	14.8
2075						
2080						
2085						
2090				10.1	4.1	11.63
2095						
2100						
2105						
2110	17.4	17.4	31.6	12.5	3.2	10.8

Harvest Value

From Even-aged and Uneven-aged Harvests

Year	CC Every 50 Yrs			Uneven Aged		
	DF	DFTO	RW	DF	DFTO	RW
2010	\$ 4,600	\$ 2,600	\$ 17,500	\$ 700	\$ 400	\$ 4,400
2015	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2025	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2030	\$ -	\$ -	\$ -	\$ 400	\$ 300	\$ 2,500
2035	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2040	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2045	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2050	\$ -	\$ -	\$ -	\$ 300	\$ 200	\$ 1,400
2055	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2060	\$ 500	\$ 500	\$ 2,000	\$ -	\$ -	\$ -
2065	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2070	\$ -	\$ -	\$ -	\$ 100	\$ -	\$ 400
2075	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2080	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2085	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2090	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100
2095	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2100	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2105	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2110	\$ -	\$ -	\$ 100	\$ -	\$ -	\$ -
Total	\$ 5,100	\$ 3,100	\$ 19,600	\$ 1,500	\$ 900	\$ 8,800

Summary

- Delaying final harvests can improve wildlife habitat, wildland fire resiliency and increase carbon values
- Delaying even-aged harvests for 15 years or so can increase discounted cash flow when the cyclic nature of the value of logs is accounted for
- Uneven-aged harvests in reasonably well stocked redwood and Douglas-fir stands can produce as much or more timber than evenaged harvests, particularly in the out years where stands carry larger trees
- Unevenaged harvests in tanoak challenged stands are a challenge and without stocking control of hardwoods cannot produce as much timber as evenaged harvest

The End (Goal!)



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