

California market

- 2006 signed AB 32 to reduce California's GHG emissions to 1990 levels by 2020.
- Capped entities can meet 8% of compliance obligation with offsets from uncapped sector until 2020.
- AB 398 passed in 2017 authorizes program through 2030.
 - Reduces offsets from out of California from 8% to 2%.
 - Out of state credits increases to 3% in 2025.
- Current value is ~\$13.50 per California Compliance Offset. Price will increase as the cap decreases.
- Recently harmonized with Quebec Market.



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- California's regulatory market and the voluntary market accept carbon offsets from State forests.
 - To determine the viability of Vermont's state forestland under different carbon offset protocols a feasibility study is required.
 - \$50,000 is the necessary capital needed to finance a feasibility study of Vermont's state forestland in the regulatory and voluntary market.



Maximum theoretical WCI Offset Demand



	2017-2020 (8%)	2021-2025 (4%)	2026-2030 (6%)
CA offset demand	104,660,465	62,971,872	90,815,359
QC offset demand	20,976,459	12,655,696	18,253,119
ON offset demand	43,081,677	25,734,847	36,776,286
WCI demand	168,718,601	101,362,415	145,844,764



Carbon price tied to allowances

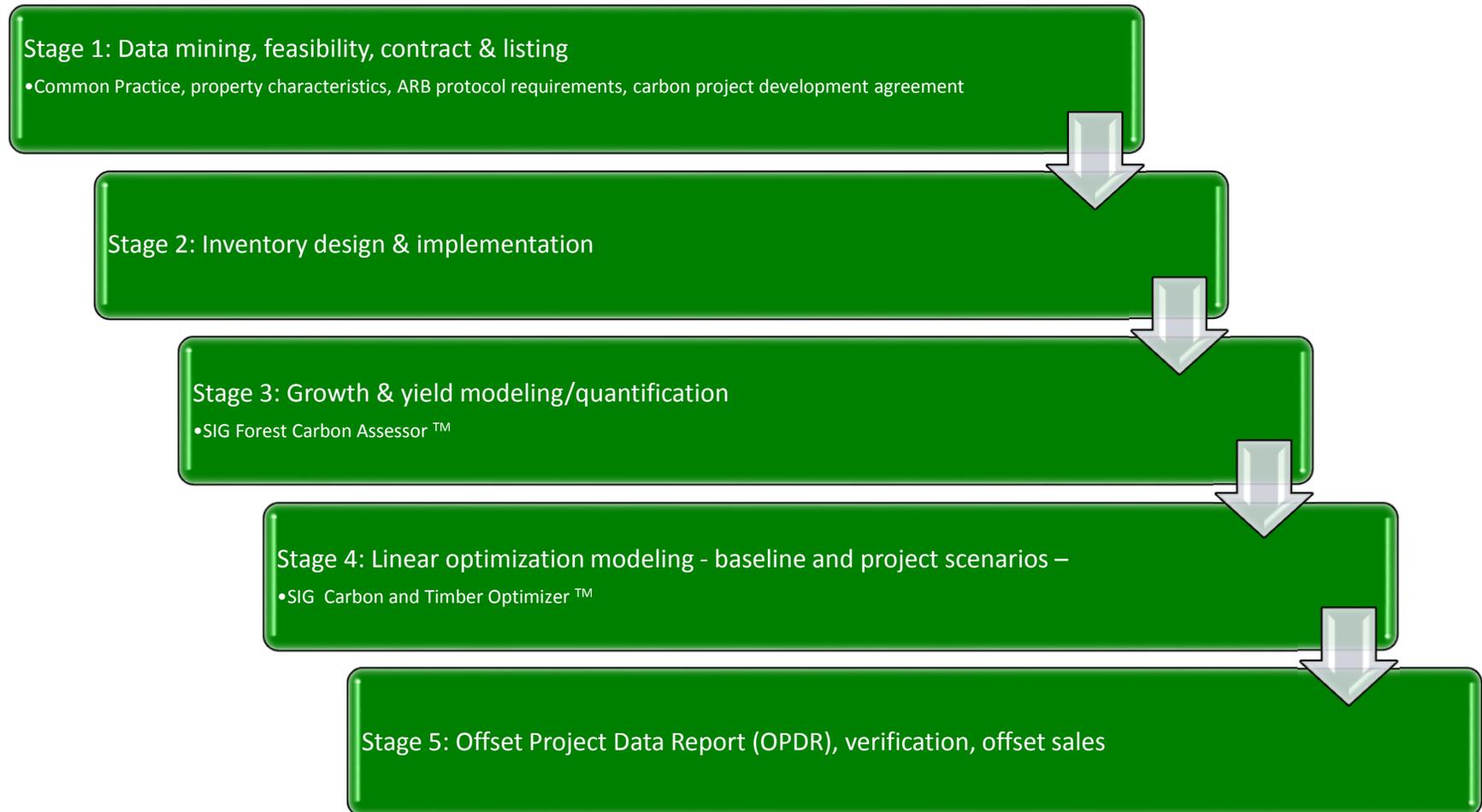
Year	Price USD			
	Reserve Price	APCR1	APCR2	Price Ceiling
2021	17.46	32.6	47.82	63.00
2022	18.59	34.8	50.93	67.10
2023	19.80	37.0	54.24	71.46
2024	21.09	39.4	57.76	76.10
2025	22.46	42.0	61.52	81.05
2026	23.92	44.7	65.52	86.32
2027	25.47	47.6	69.77	91.93
2028	27.13	50.7	74.31	97.90
2029	28.89	54.0	79.14	104.26
2030	30.77	57.5	84.28	111.04



Who buys the offsets?



SIG carbon project development process



Stage 1. Data mining, project feasibility & listing

- Assess property characteristics

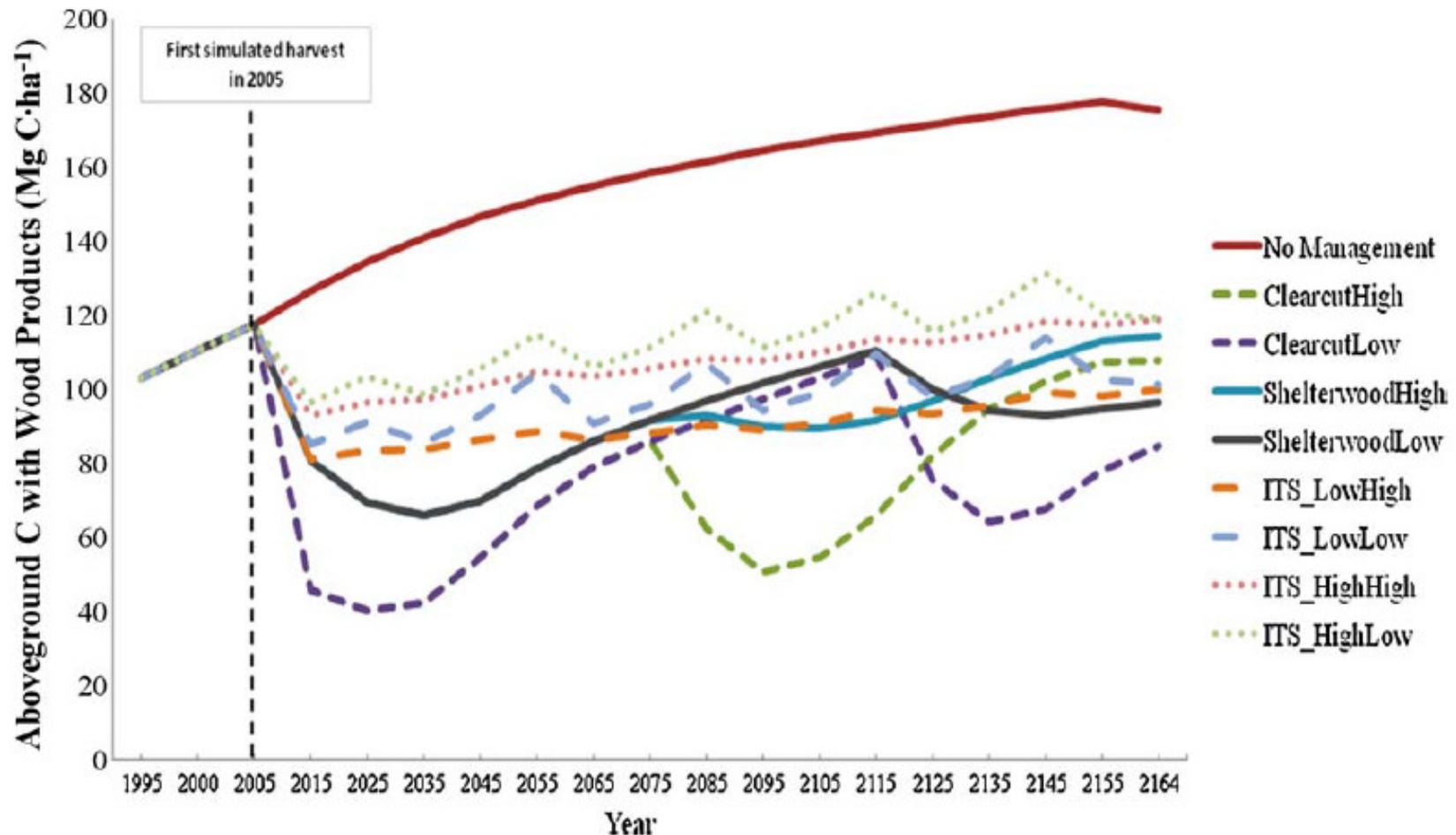
- Stocking
- Size
- Forest type

How property characteristics intersect with ARB forest protocol

- Stratification & Project Area (e.g. carbon 'hotspots')
- Common Practice (Species composition, TPA, or FIA algorithm)
- Start date (backcasting)
- Legal constraints
- Future management
- Consider reversals & invalidation (spread risk across multiple projects)



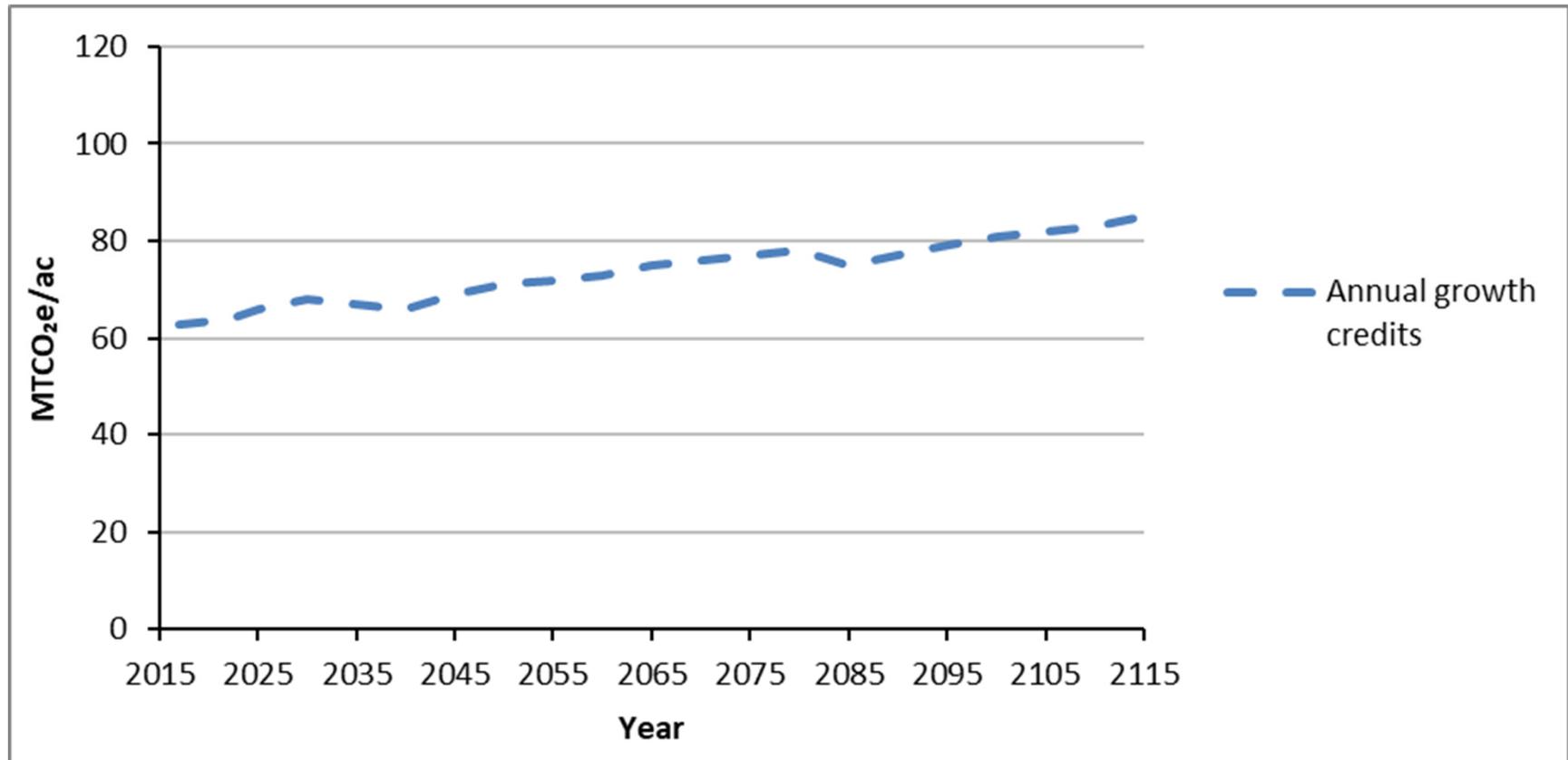
Growth and yield modeling + Optimization



Nunery & Keeton, 2010



Annual growth credits



Landowner commitment

- Forest owners must monitor and verify a forest project for 100+ years.
- Initial site verification.
- Site-visit verification every six years.
- Monitoring - annual reports.
- Can harvest.

