

ANALYSIS OF THE BLM WOPR USING THE WESTERN OREGON TIMBER SUPPLY MODEL

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Projection Requirements

- Spatial flows from woods to milling facilities
- Milling details for impact estimates
 - Output
 - Capacity investment
- Other market changes
 - Harvest substitution among ownerships
 - Log price

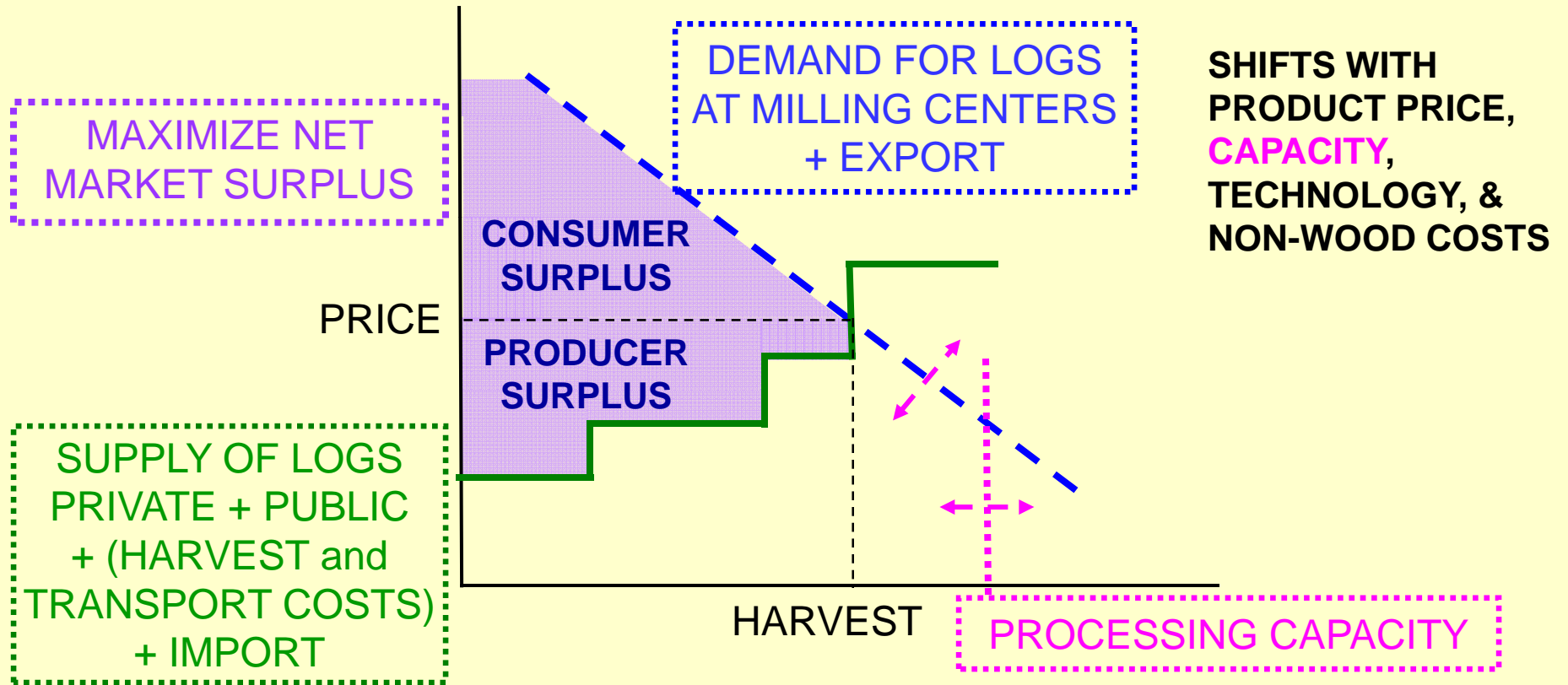
INTRODUCING HARVEST CHANGES IN THE MODEL

- Softwood harvest by BLM district and county
- Originates at representative location (given district and county)
- Exogenous harvest volume (fixed expansion in supply)
 - Log supply shifts to the right
 - No minimum log price
- Transport costs to processing centers

STRUCTURE OF MARKET MODEL

- Dynamic, spatial equilibrium model—mimics market behavior over time
- Mills and private log supply points (inventory plots) have specific locations—spatially explicit
- Locations for public supplies less specific
- Capacity investment is explicit—critical for a dynamic model and leads to quite different price and quantity reactions compared to static models

Methods: Spatial Log Market Model

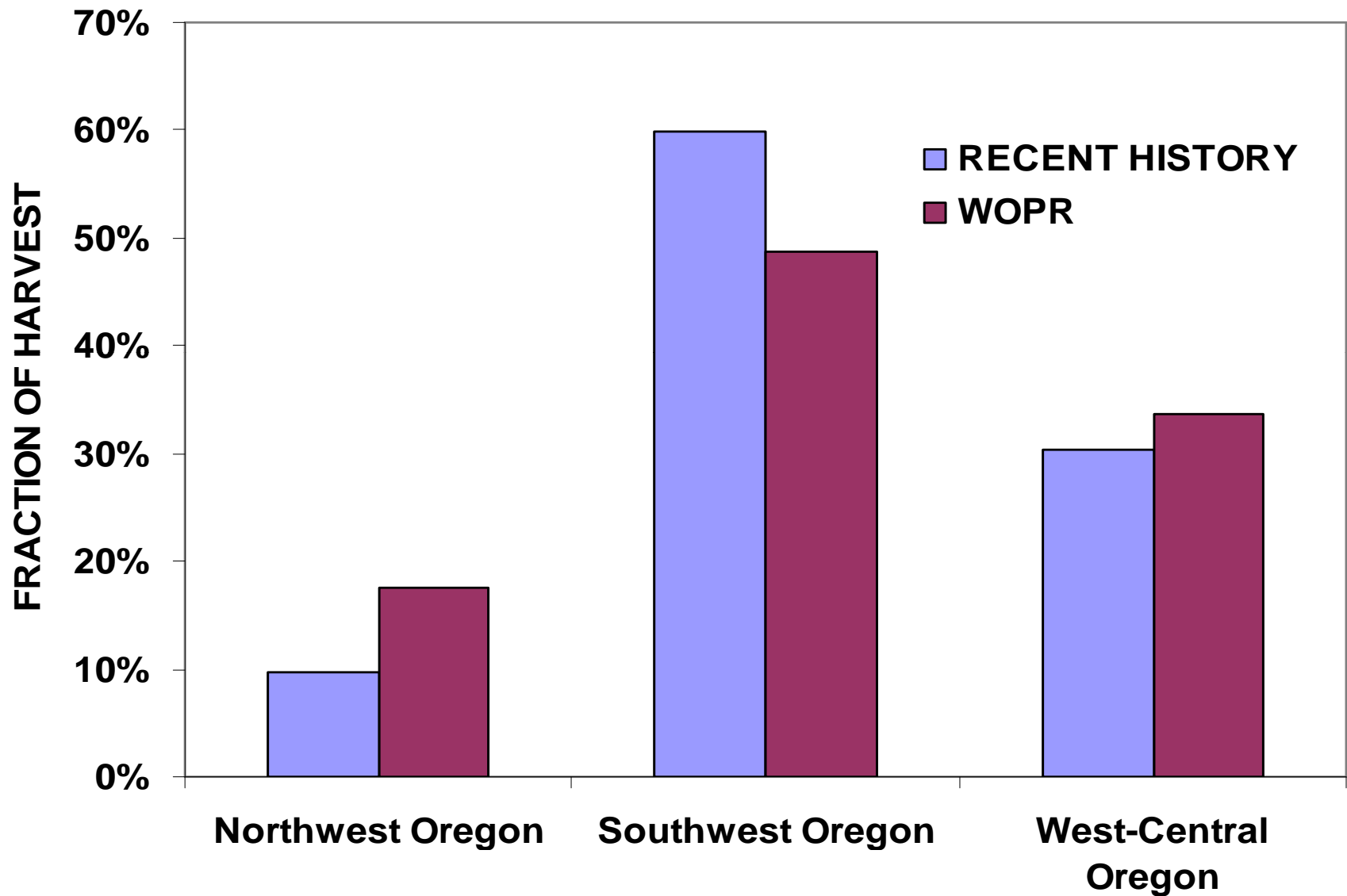


SHIFTS WITH
PRODUCT PRICE,
CAPACITY,
TECHNOLOGY, &
NON-WOOD COSTS

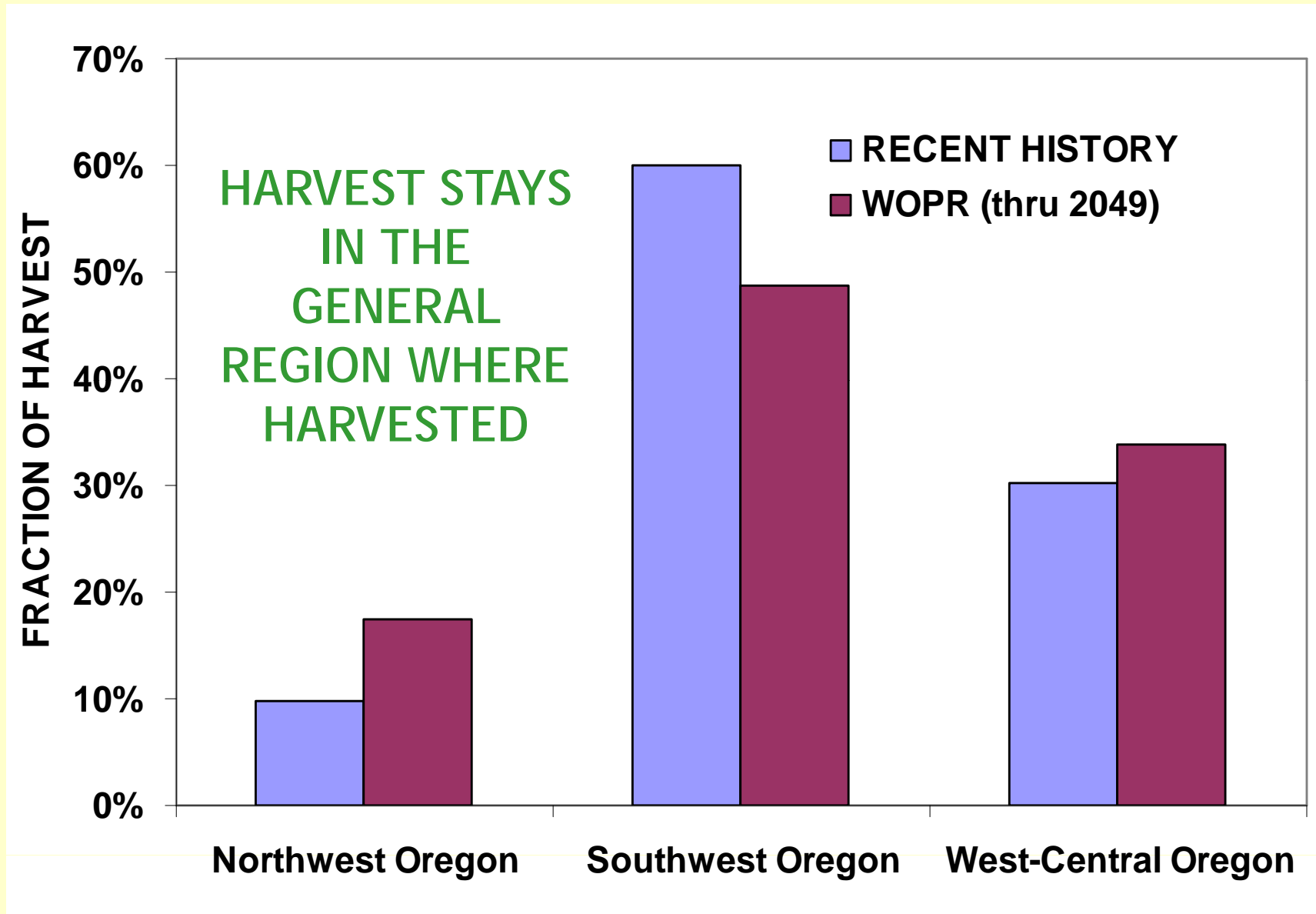
PRIVATE SUPPLY SHIFTS
WITH COSTS OF MANAGEMENT &
INTEREST RATE,
PUBLIC SUPPLY WITH PUBLIC POLICIES

SHIFTS WITH PRODUCT PRICE,
EQUIPMENT COSTS,
DEPRECIATION, INTEREST RATE

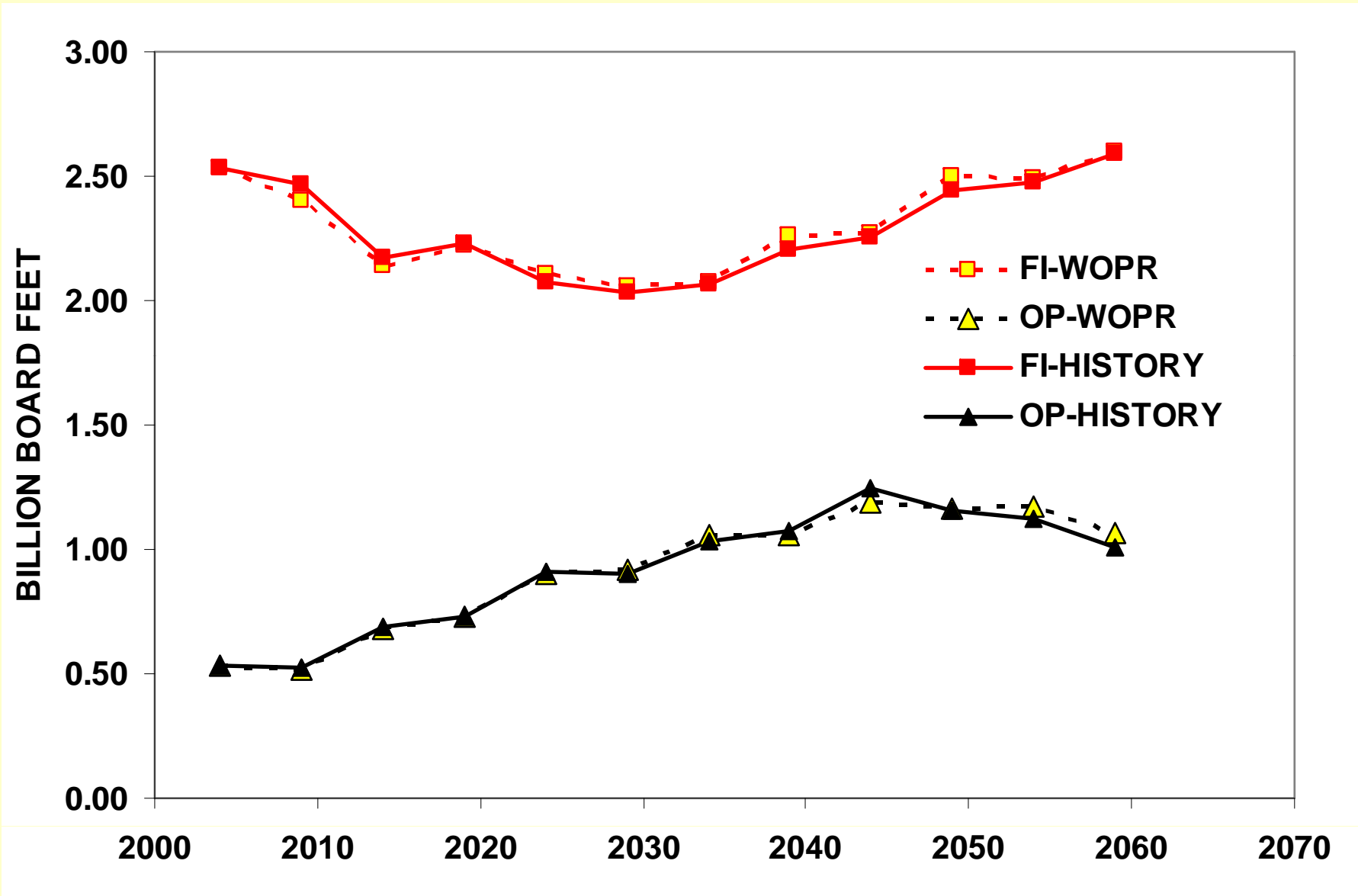
WHERE BLM HARVEST COMES FROM: BY FIA SURVEY UNIT



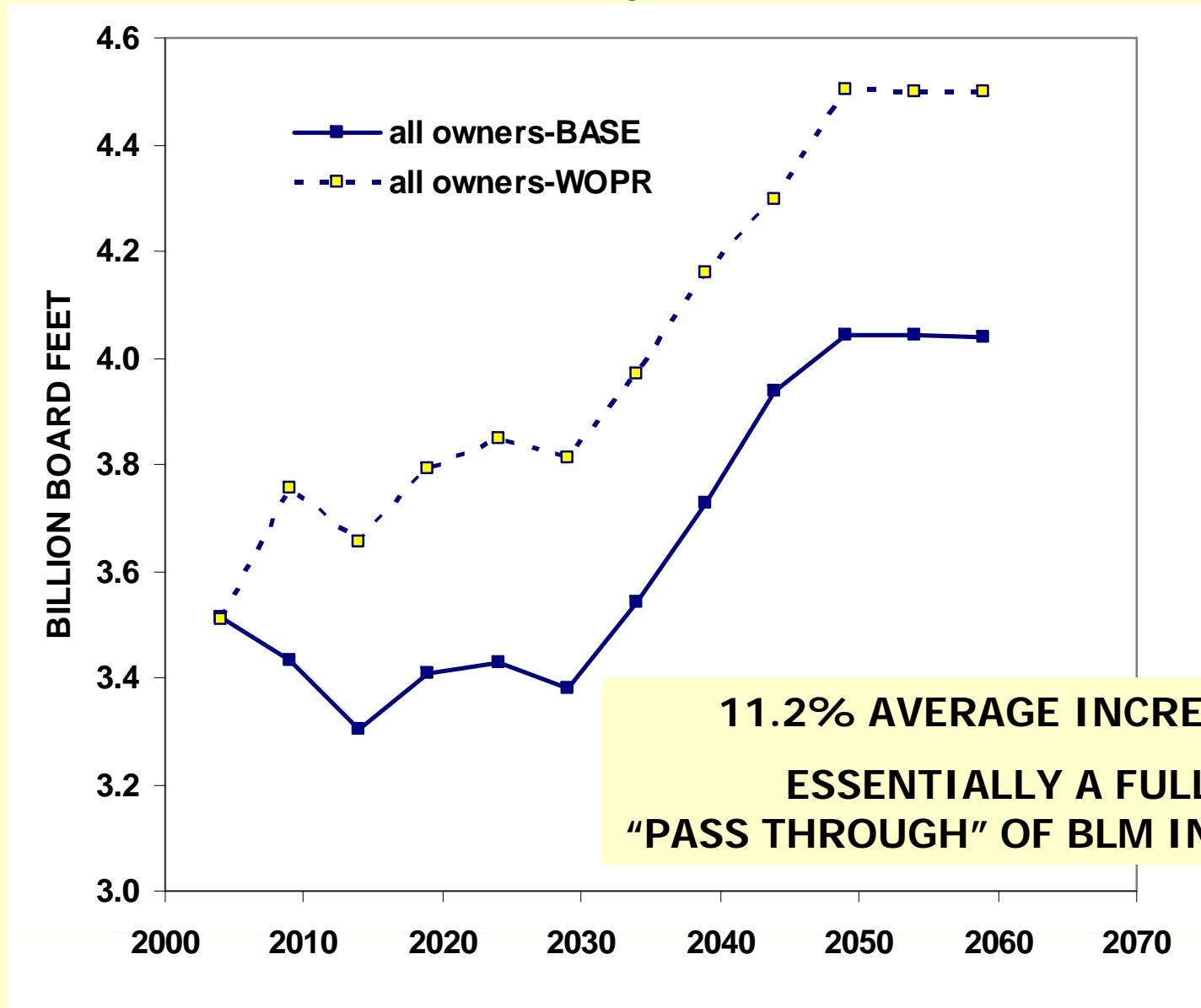
WHERE BLM HARVEST GOES: BY FIA SURVEY UNIT



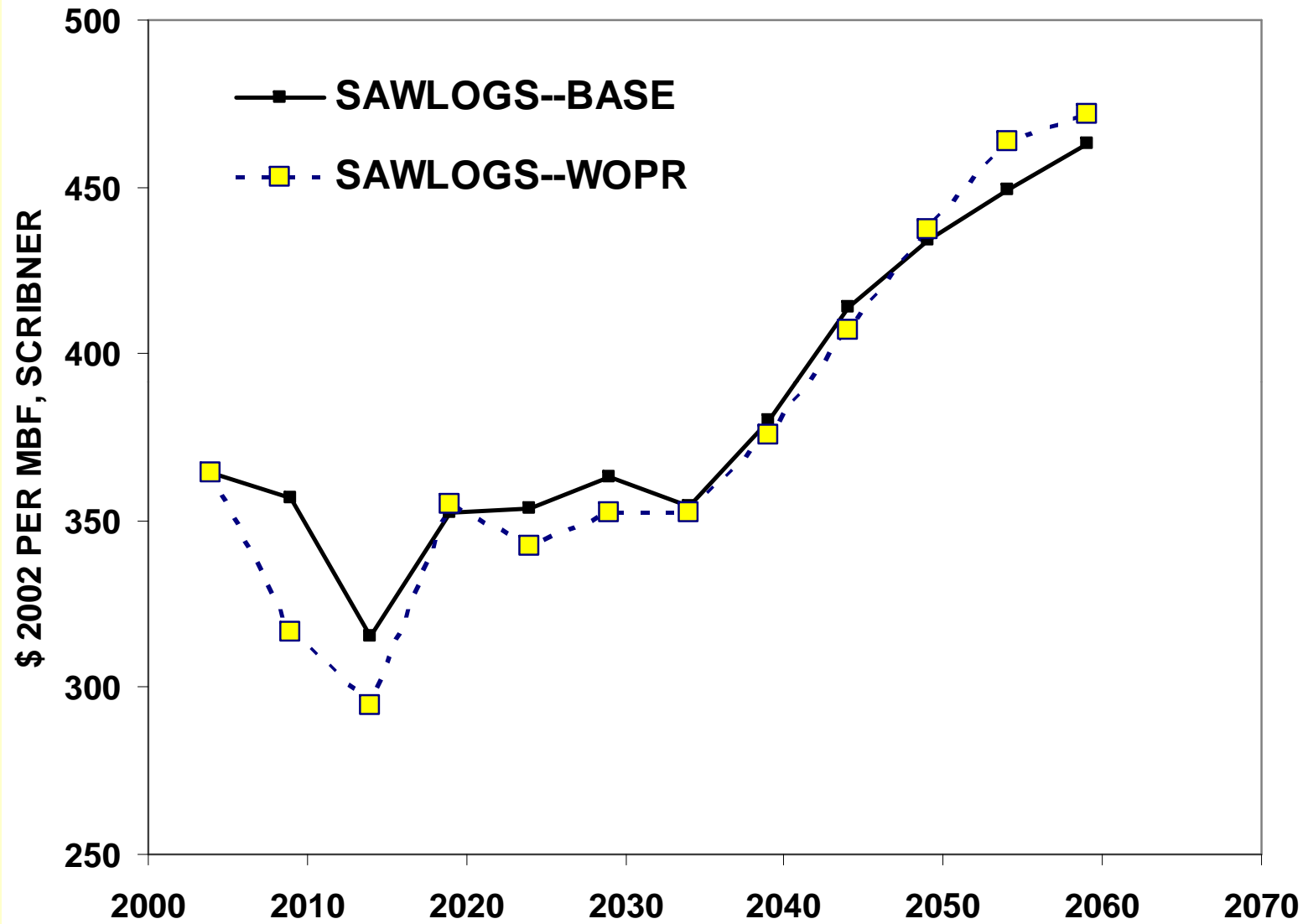
PRIVATE HARVEST: CURRENT AND WOPR



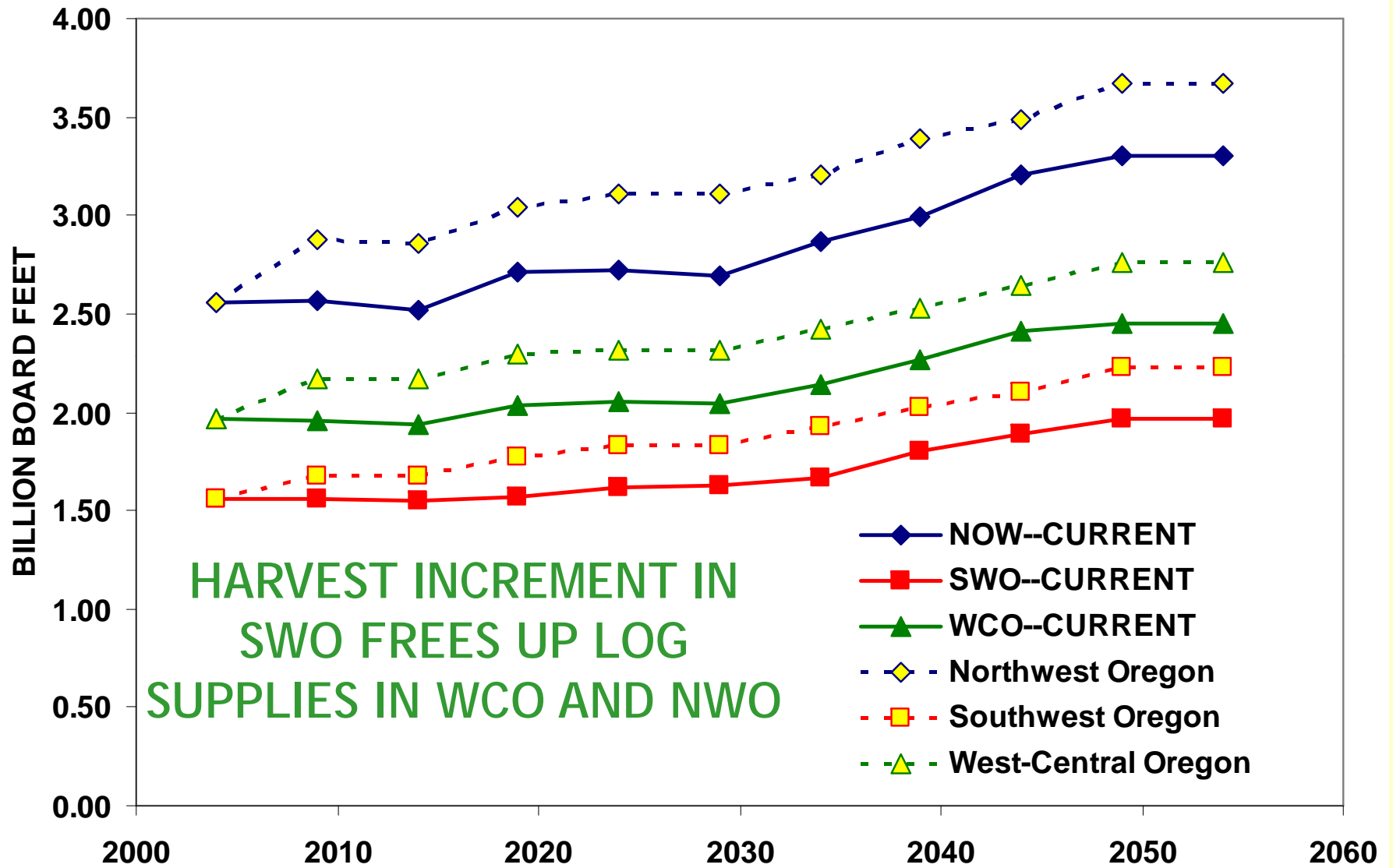
WOR HARVEST, ALL OWNERS



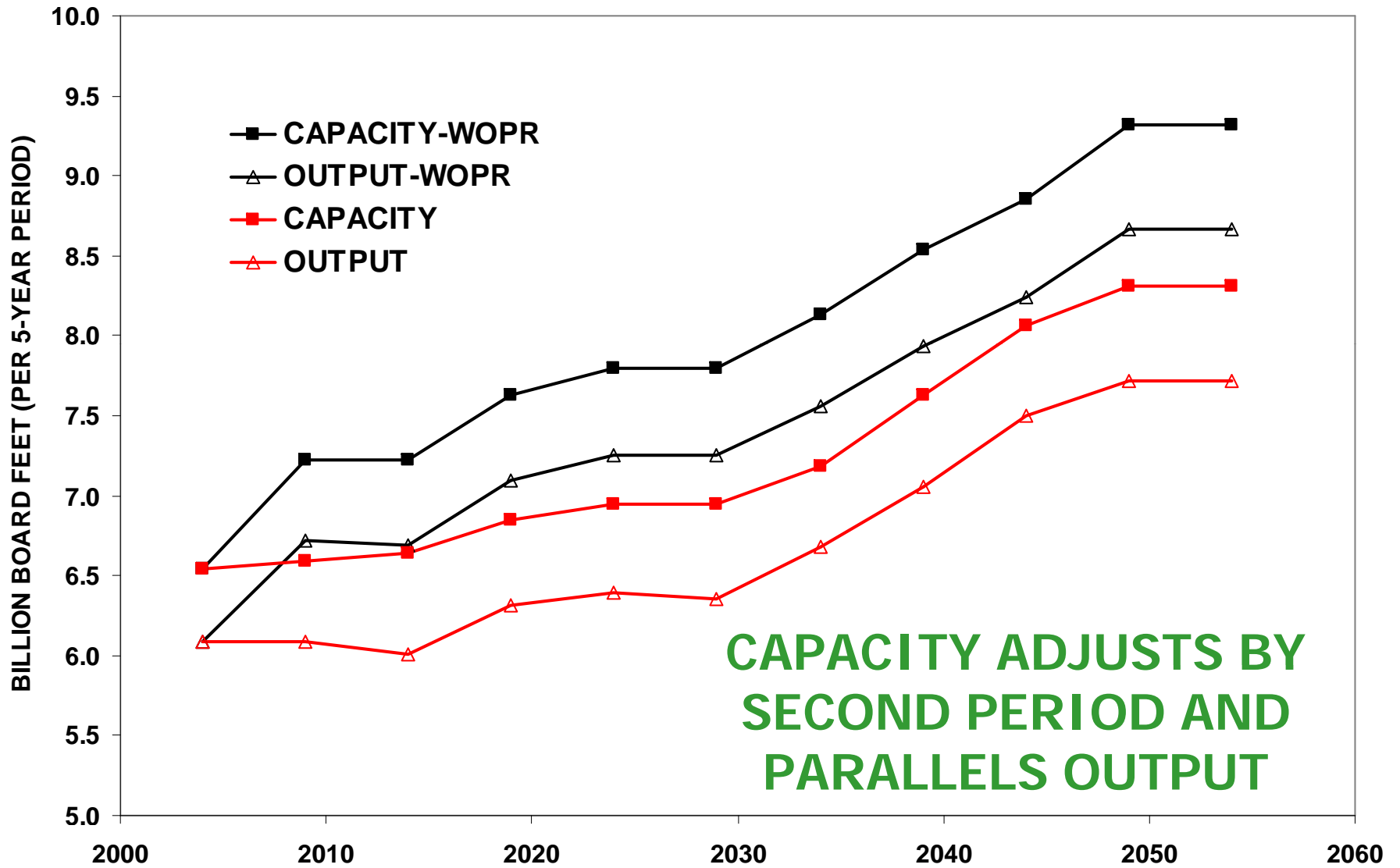
AVERAGE REAL DELIVERED SAWLOG PRICES IN WOR



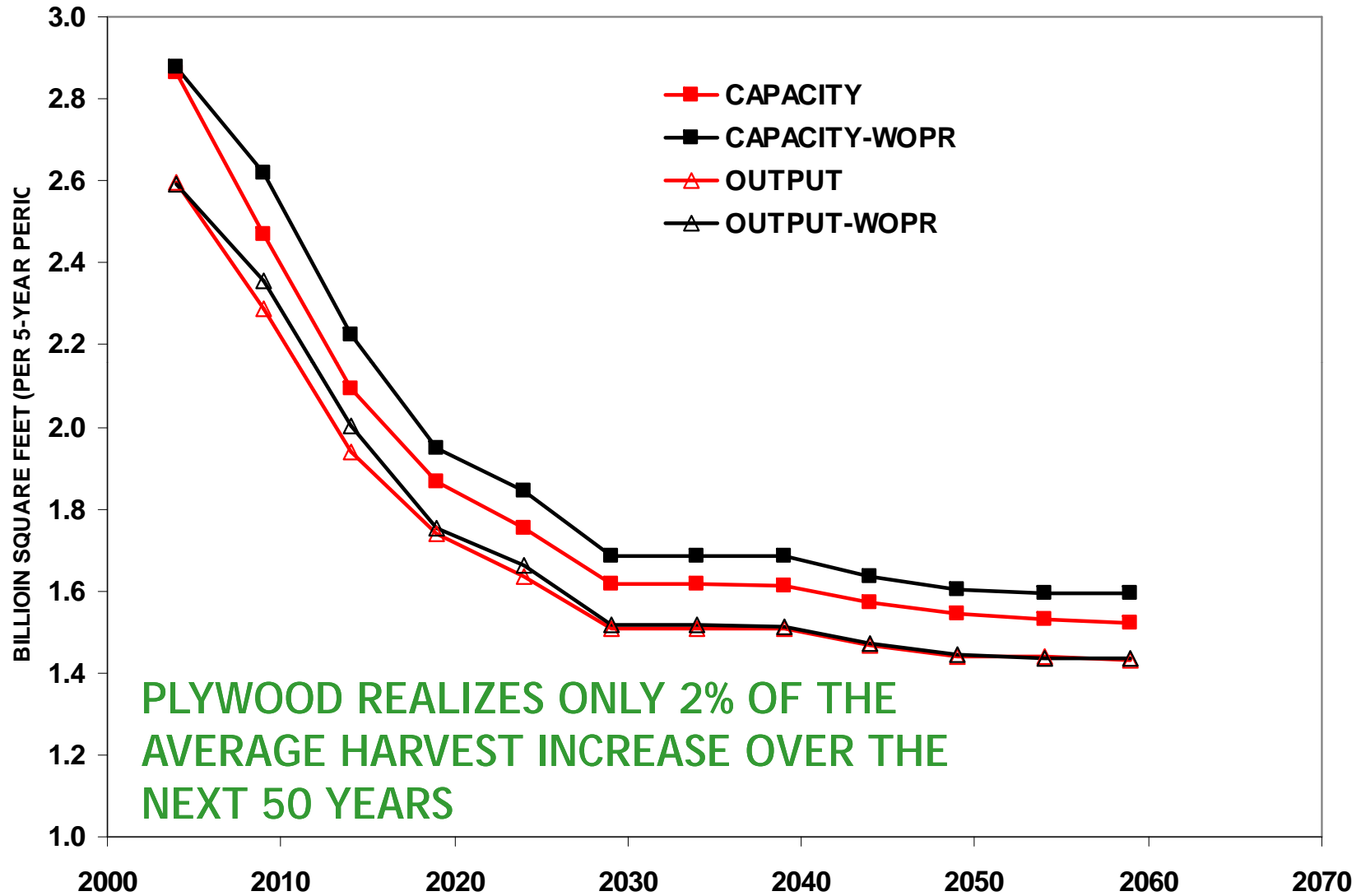
LUMBER PRODUCTION BY FIA SURVEY UNIT



WESTERN OREGON LUMBER CAPACITY AND PRODUCTION



WESTERN OREGON PLYWOOD PRODUCTION AND CAPACITY



SOME MAJOR RESULTS

- 98% of harvest increase goes to lumber
- Capacity adjustment effectively eliminates harvest substitution and moderates price impact
- BLM harvest increments absorbed in regions of origin
- Adjustment of log flows across WOR allows largest lumber output change in NWO