FOREST INVESTMENT ASSOCIATES

Forest Inventory and Analysis Users Group

End User Perspectives

Overview
Discussion Outline

- Industry End User Perspectives – Why we are interested in FIA data and analyses

  - Traditional FIA data analyses

  - Sustainability calculations and analyses

  - Where the core FIA activities fit within the FIA program

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Forest Investment Associates
Introduction

From the firm's inception in 1986, FIA's founders pioneered institutional timberland management.

$5.6 billion in timberland assets under management
- 3.3 million acres of timberland in 19 U.S. states, Brazil & Chile
- 19 separate account relationships, 72% of AUM
- 5 commingled funds, 28% of AUM

Independent: broad employee ownership within our 57 employees
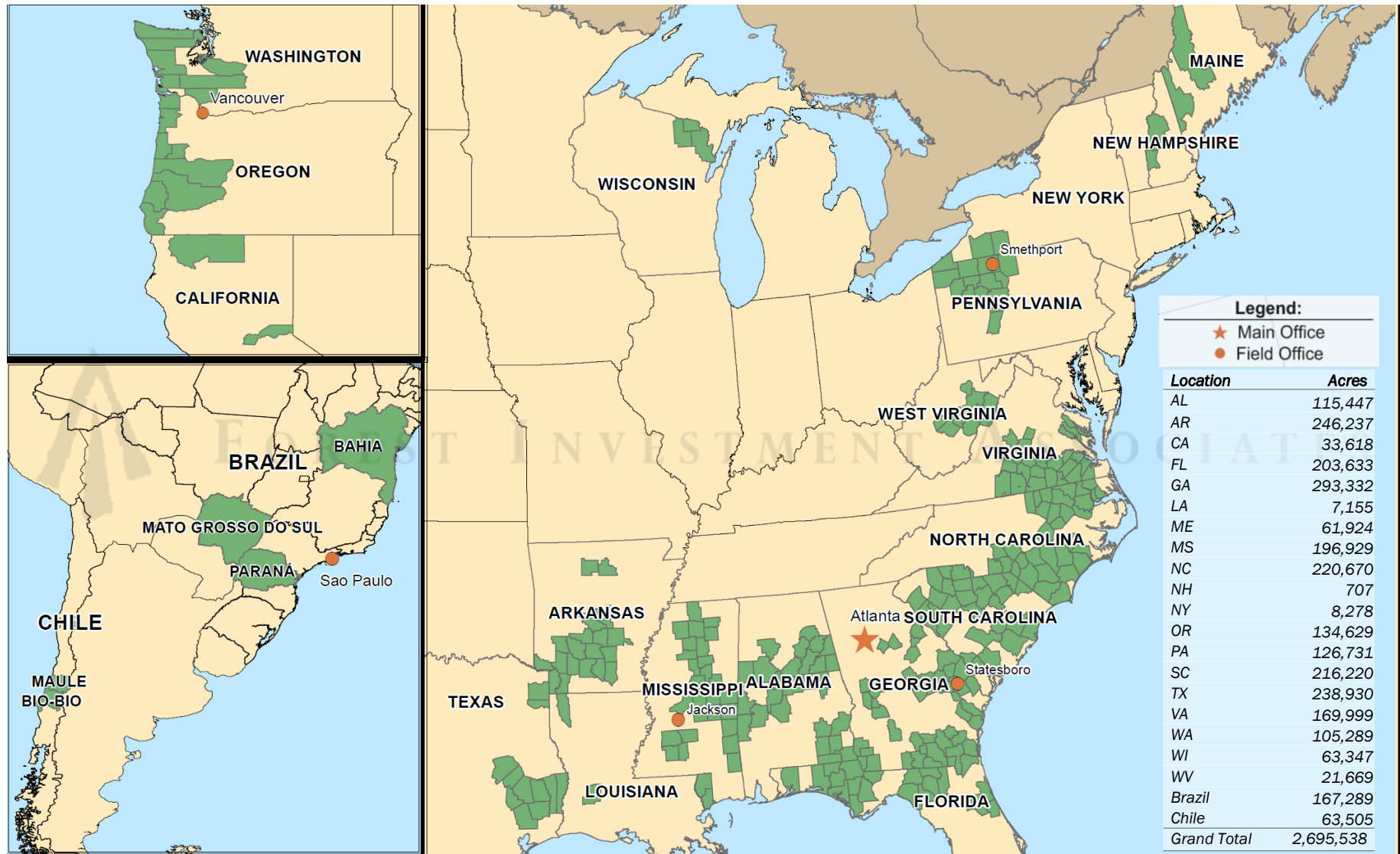(49 of which are shareholders and 26 of which are foresters)

Versatile structure allows for evaluation, acquisition, and management of properties across U.S. industrial regions and global markets

Thirty years of experience in complex transactions, joint ventures, supply agreements, and financing structures

Forest Investment Associates' Client Portfolio

2,695,538 Acres Under Management

Legend:
- ★ Main Office
- ● Field Office

Location	Acres
AL	115,447
AR	246,237
CA	33,618
FL	203,633
GA	293,332
LA	7,155
ME	61,924
MS	196,929
NC	220,670
NH	707
NY	8,278
OR	134,629
PA	126,731
SC	216,220
TX	238,930
VA	169,999
WA	105,289
WI	63,347
WV	21,669
Brazil	167,289
Chile	63,505
Grand Total	2,695,538

The areas highlighted represent counties / countries in which FIA's existing clients own timberland.
As of December 31st, 2016

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Traditional FIA data uses and Analyses
The "Standard" Uses

Traditional uses include

- "snapshots" of acres and inventory by custom geographies – Basin or woodbasket analyses
- Primarily focused in the major timber growing regions of the US
- Data are used as input into a variety of models that project supply, demand, and price by product

These analyses inform a variety of decisions on the timberland and the manufacturing side of the business

- Timberland investments
- Mill investment decisions
- Sustainability measures and discussions

Traditional FIA data uses and Analyses
Needs

Needs for the Traditional Analyses

- Timeliness of data collected – All data should be available to users within 30 days of collection

- Multiple units of measure – Cubic feet is rarely the UOM that is of interest. Should try to provide the "standard" UOM for the area along with cubic feet

- Ownership class is important to us. Find ways, where appropriate, to provide as much ownership data as possible

- Increased information on forest management practices that have occurred on FIA plots if possible

- Small area estimation techniques are important to us

- TPO data are important to many of these decisions. We need accurate and precise estimates of timber product output that are both temporally and spatially consistent

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Sustainability Analyses and Discussions
Uses and Needs

Sustainability analyses and discussions

- FIA data have been a primary component in framing basic forest sustainability discussions

- These analyses / discussions have been important in opening several overseas markets – particularly biomass / pellet markets in Europe

- Important to developing carbon markets and participation in those markets

- Growth, Removals, and Mortality calculations are important in this discussion. We need these estimates

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FIA Core Activities and Funding
Challenges and Opportunities

FIA Core Activities

- What constitutes "core" has changed dramatically over my career – 1983 to today

- The industrial needs are most focused on timeliness and availability of data for "custom" analyses

- Our primary budget objective is to help focus spending on those activities that insure timeliness of data collection