A Market Based Strategy for Rural Development In Northwest Louisiana: Maximizing Opportunities Through Value-Added Forest Products Industries

Conducted by:

Forest Products Marketing Program

Louisiana Forest Products Laboratory

Louisiana Agricultural Experiment Station

Louisiana State University Agricultural Center

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- Pamela Davidson Ehlers, Economic Development Administration
- Max LeComte/Diana Simek, Coordinating and Development Corp.
- Richard Vlosky-Project Overview, Methodology
- Paul Chance-Study Overview, Resource Assessment, Industry Structure
- David Hughes- Economic Assessment and Growth Scenarios
- Richard Vlosky-Market and Product Assessment
- Pamela Monroe/Lydia Blalock-Social Dimensions/Work Readiness
- Paul Chance-Employee Training & Development
- Rich Vlosky-Recommendations, Summary
- Questions
- Lunch

Outline

- Project Overview
- An Approach to Forest-Based Development
- The Study and Results
- Recommendations
- Summary

Overview

In general, forest products companies located in rural areas provide jobs with wages competitive with other industries.

In rural areas where jobs are scarce, forest products jobs may provide alternatives to forced migration or commuting.

Overview

This project is is based on an approach to stimulate economic development in depressed rural resource-based regions.

The focus is on the secondary or value-added forest products industry.

Goal is to identify long-term sustainable industry potential.

Overview

- add value to existing resources
- create employment opportunities
- maintain the stewardship of the resource

An Approach to Forest-Based Economic Development

Sustainable Forest Sector Economic Development

Resource Assessment

Key Questions
Resource Assessment

Are there ample timber resources to support value-added secondary forest products industry development?

Is the focal region located within reasonable transporting distance of significant standing timber inventories?

What are the trends: ownership, forestland acreage, growing stock, growth/removals, sawtimber, diameter classes, species, etc.

Sustainable Forest Sector Economic Development

Resource Assessment	**Industry Structure Profile**

Key Questions-Industry Structure

What is the structure of the established primary and secondary forest products industry base?

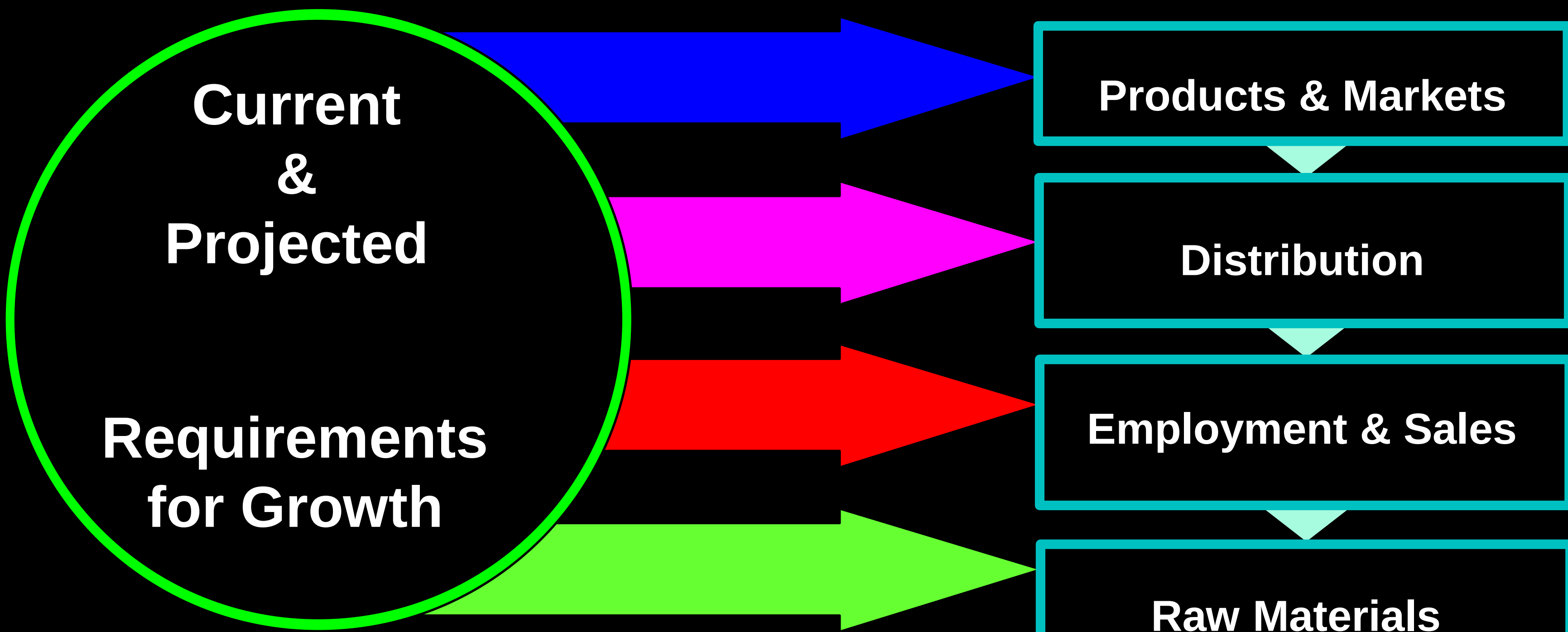
What types of manufacturing processes and equipment do current companies use?

Is there the presence of sawmills, dry kilns, millwork plants, OSB production which could support significant development?

Are companies able to compete in the markets they serve.

How have those companies which have grown and prospered done so? (exploiting specialty niches, cutting costs, etc).

Industry Structure



Sustainable Forest Sector Economic Development

Resource Assessment	Industry Structure Profile	**Market Assessment**

Key Questions
Market Assessment

What is the product mix of the companies?

What are current markets and customer bases? (Both domestic and export).

What is the quality and level of acceptance in current markets?

What product sectors have a high probability of success for further development?

Sustainable Forest Sector Economic Development

Resource Assessment	Industry Structure Profile	Market Assessment

Economic Effects

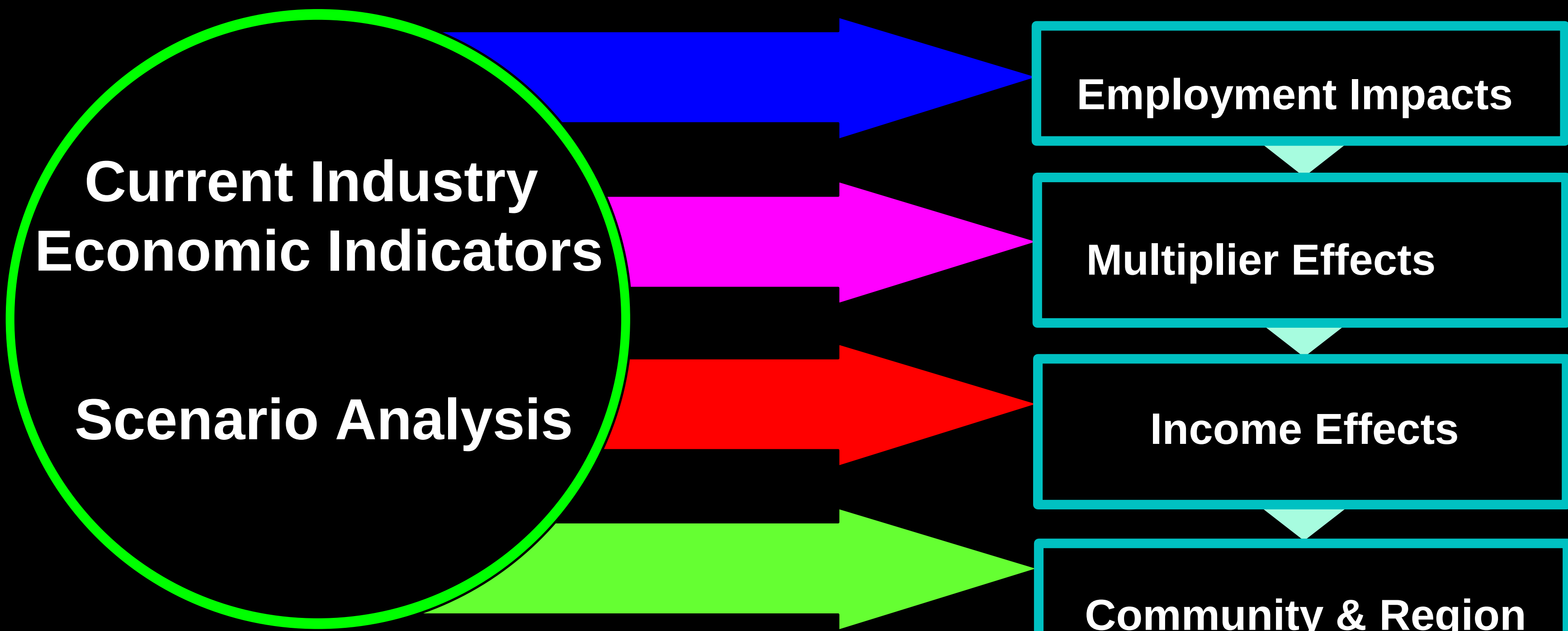
Key Questions
Economic Impacts

What economic impacts result from forest based industry development?

What are the economic ramifications at the community, regional and state levels?

What are the effects of different industry growth scenarios?

Economic Impacts



Sustainable Forest Sector Economic Development

Resource Assessment	Industry Structure Profile	Market Assessment
Economic Effects	**Social Structure & Work Readiness**	

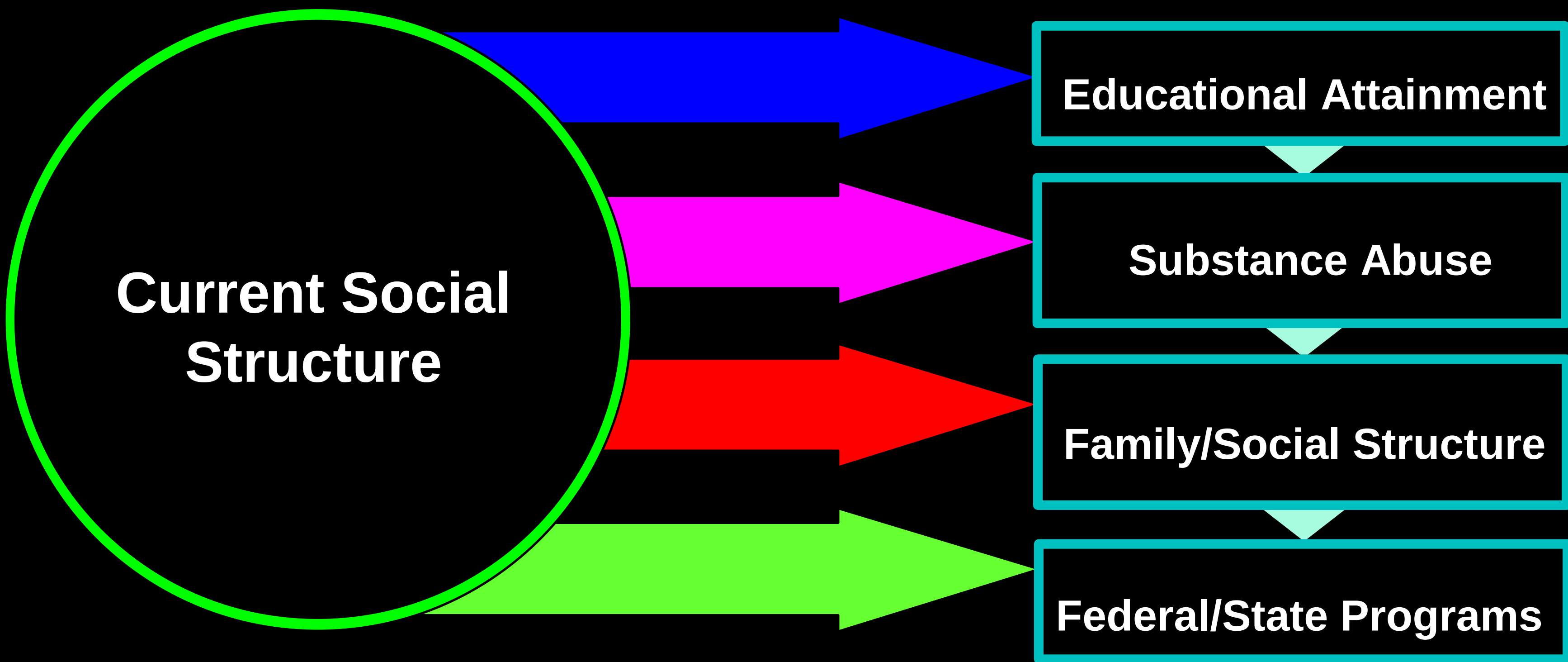
Key Questions
Social Structure/Work Readiness

What are the characteristics of the eligible workers for the value added secondary wood products industry?

What are the labor skill needs for this industry?

Will it be feasible to introduce value-added industries to economically depressed areas to support welfare reform policies?

Social Structure and Work Readiness



Sustainable Forest Sector Economic Development

Resource Assessment	Industry Structure Profile	Market Assessment
Economic Effects	Social Structure & Work Readiness	**Structural Impediments**

Key Questions
Structural Impediments

What are the most important factors preventing secondary forest products industry development?

What will it take to encouraging manufacturing?

Sustainable Forest Sector Economic Development

Resource Assessment
Industry Structure Profile
Market Assessment

Economic Effects
Social Structure & Work Readiness
Structural Impediments

Training & Development

Sustainable Forest Sector Economic Development

Sustainability

Resource Assessment

Industry Structure Profile

Market Assessment

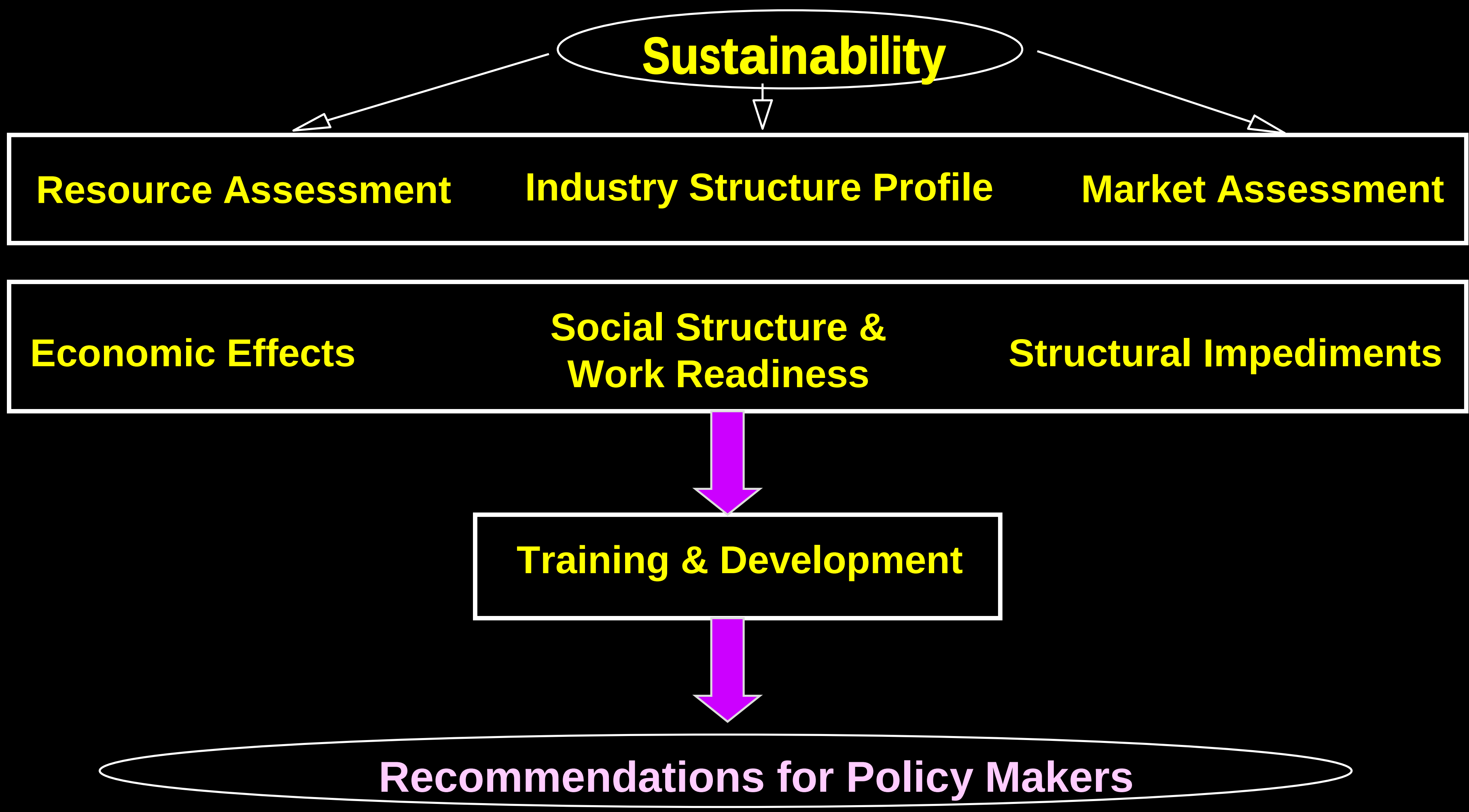
Economic Effects

Social Structure & Work Readiness

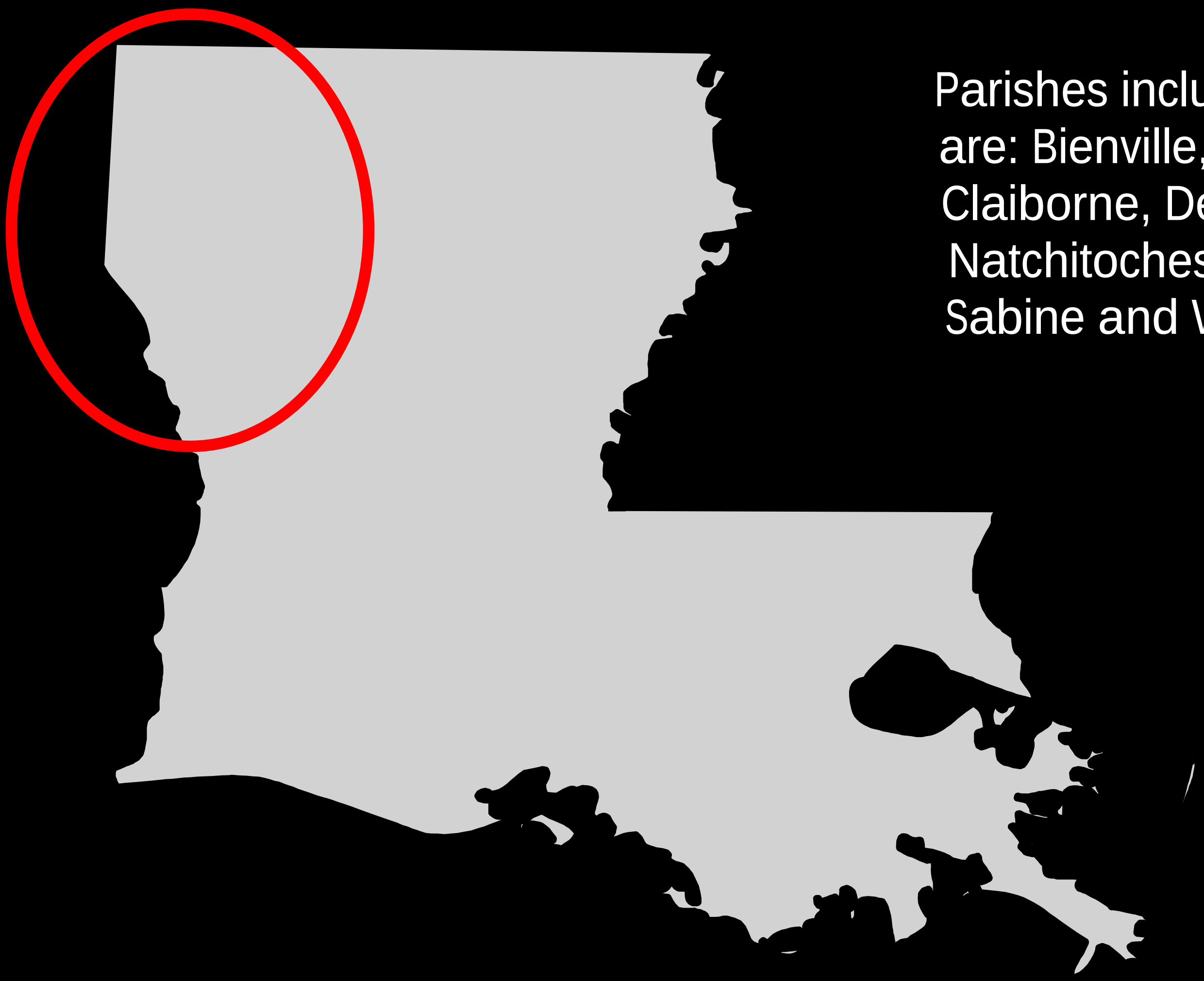
Structural Impediments

Training & Development

Sustainable Forest Sector Economic Development

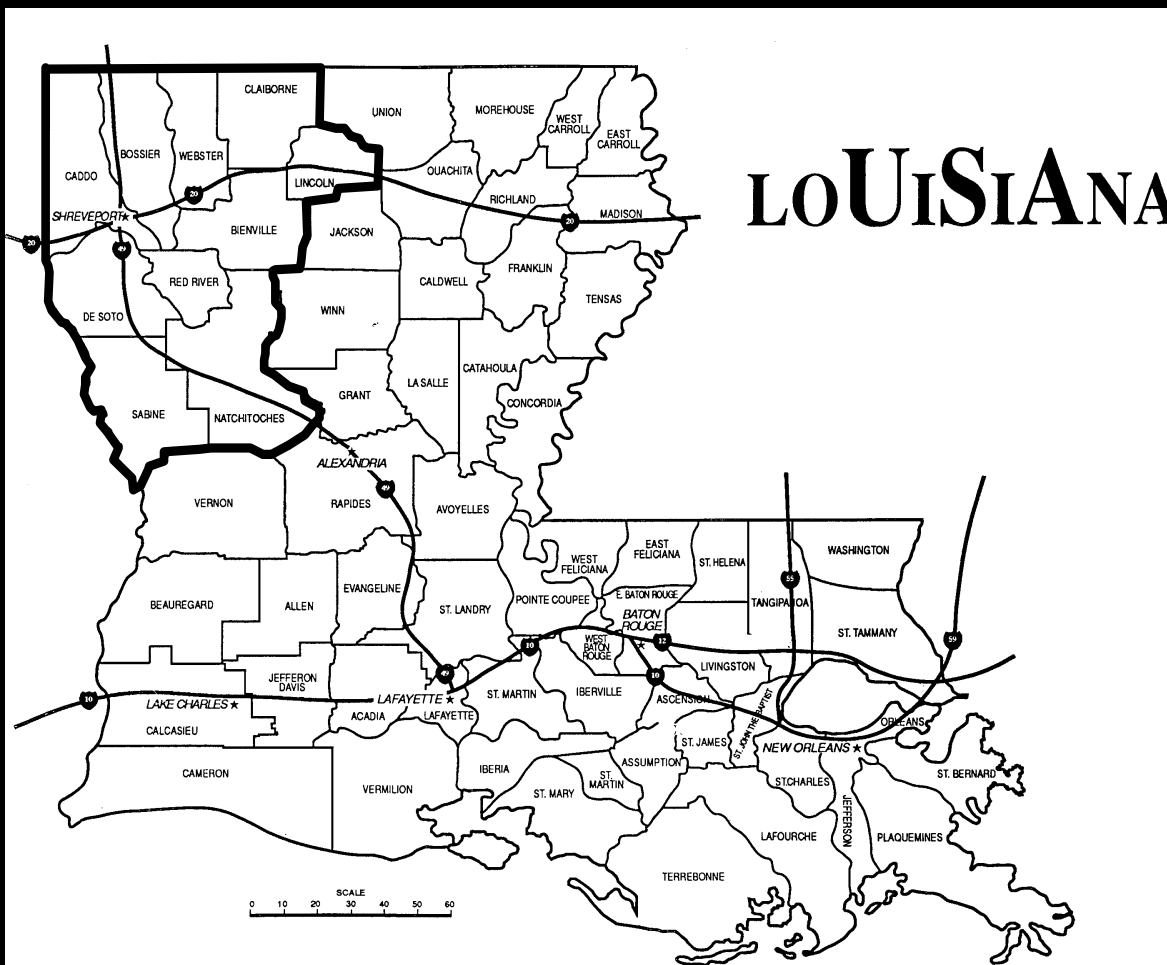


The Study



Parishes included in the study are: Bienville, Bossier, Caddo, Claiborne, Desoto, Lincoln, Natchitoches, Red River, Sabine and Webster.

The Study Area



Parishes included in the study are: Bienville, Bossier, Caddo, Claiborne, Desoto, Lincoln, Natchitoches, Red River, Sabine and Webster.

The Problem

In the wood products industry, Louisiana produces only $.97 of value-added product for every $1.00 of lumber created by the sawmills operating in the state.

This compares to the southern average of $2.13 of value-added for $1.00 of sawmill product produced.

Improvement of industry competitiveness can increase potential for jobs creation and resource utilization in the rural-based forest products industry.

The Problem

However, to attain this potential, a wide variety of issues must be addressed.

For example existing consumer market trends, location decision criteria, raw materials availability and applicability, labor force skills and training requirements, target market identification, recruitment and retention strategies, comparative advantages and effects on community stability should all be considered as part of an economic development initiative.

Project Objectives

① Conduct a regional forest resources assessment as an indication of raw material supplies.

② Identify the existing industry structure.

③ Analyze sources of competitive advantage for the region's secondary forest products manufacturing base and identify broad sectors with high growth and market potential.

④ Determine social and economic profiles for the study region.

⑤ Describe the pool of eligible workers in the area to support industry development.

Project Objectives

⑥ Identify labor skill needs of the value-added secondary forest products industry.

⑦ Estimate economic impacts resulting from forest based industry development.

⑧ Generate information that can assist policy makers to formulate strategies for implementation of rural economic development efforts designed to capitalize on defensible market driven opportunities in forest products industry sectors.

Summary Results

Resource Assessment

- The ten-parish study region covered in this report represent 15.6% of the parishes of Louisiana. However, timber lands in the region account for approximately 3.6 million acres or nearly 26% of the total 13.9 million acres of forested land in Louisiana.

- Predominant species include 2.37 million acres of southern yellow pine and oak, 691 thousand acres of upland hardwood species such as oak, hickory and sweetgum and about 535 thousand acres of bottom-land species such as water oak, tupelo gum and cypress.

Resource Assessment

- The data clearly indicates that the study region contains significant quantities of quality commercial softwood and hardwood timber to support further development of the secondary forest products industry.

- Companies in the region produce a wide variety of products from the resource base and distribute these products around the world. In addition to the utilization of raw materials from within the region, these companies also import raw materials from adjacent states and parishes to manufacture products for industrial, commercial and end-user markets.

Resource Assessment

- Most parishes in the region have seen increases in volumes of forestland between 1984 and 1991. Sabine parish has the greatest volume of softwood while Natchitoches parish contains the greatest volumes of hardwood species. Considering softwoods and hardwoods combined, Natchitoches parish has more timberland than any other parish in the study region.

- Volumes of cypress timber in the region, though significantly smaller than that of pine, have grown during the past decade. This increase in standing cypress timber may well represent a niche-specific opportunity for job creation.

Resource Assessment

- A reduction in growth/removal ratios for the region indicates that harvesting pressure is being placed on the resource.

- Volume for all diameter size classes except pole timber has increased over the 1974-1984-1991 time periods. This finding is important given the conventional wisdom that holds that private landowners are less likely to replant once they have harvested the commercial timber on their lands.

- Future supplies of hardwood resources for value-added solid wood processing may be affected if the existing hardwood timber stands of immature trees are sold for chip and paper production.

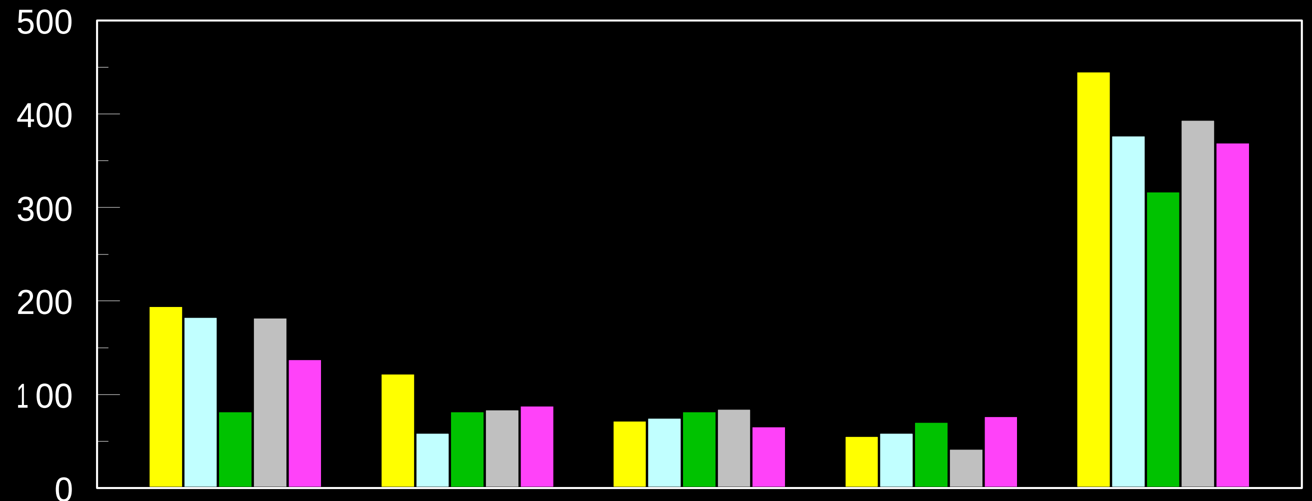
Resource Assessment

- Private non-forest industry landowners make up the majority of the land ownership structure in the region. This is a crucial factor because it could have significant impact on the availability of raw materials, how and to whom these raw materials are sold and the amount and distribution of regeneration of timber resources on these lands.

1991 Northwest Forestland Area

By Species Group By Parish

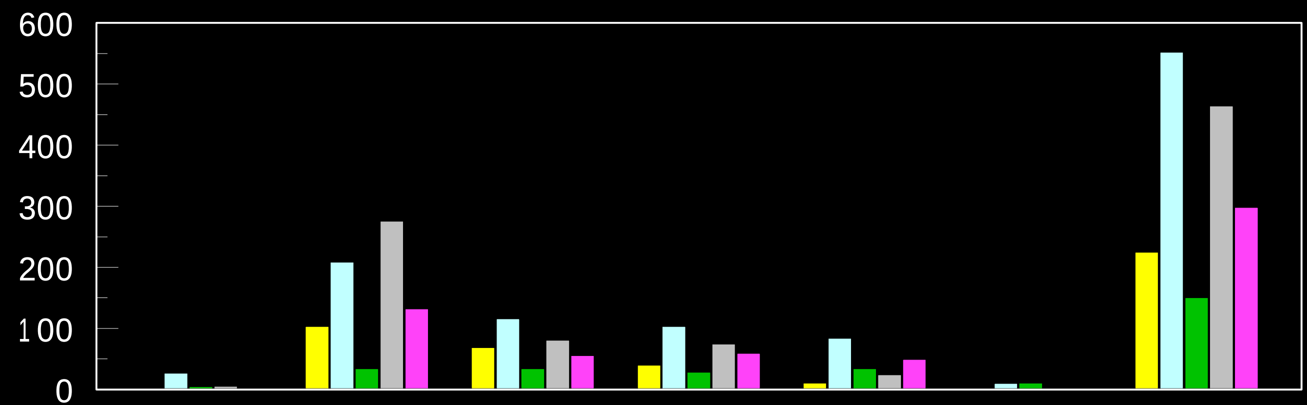
(thousands of acres)



	loblolly/shortleaf	oak-pine	oak-hickory	oak-gum-cypress	total
Bienville	194.93	122.53	72.40	55.70	445.56
Bossier	183.22	59.28	75.44	59.28	377.22
Caddo	82.04	82.04	82.04	71.10	317.22
Claiborne	182.46	84.31	85.06	42.15	393.98
DeSoto	137.95	88.29	66.22	77.25	369.72

1991 Northwest Forestland Area

By Species Group By Parish
(thousands of acres)

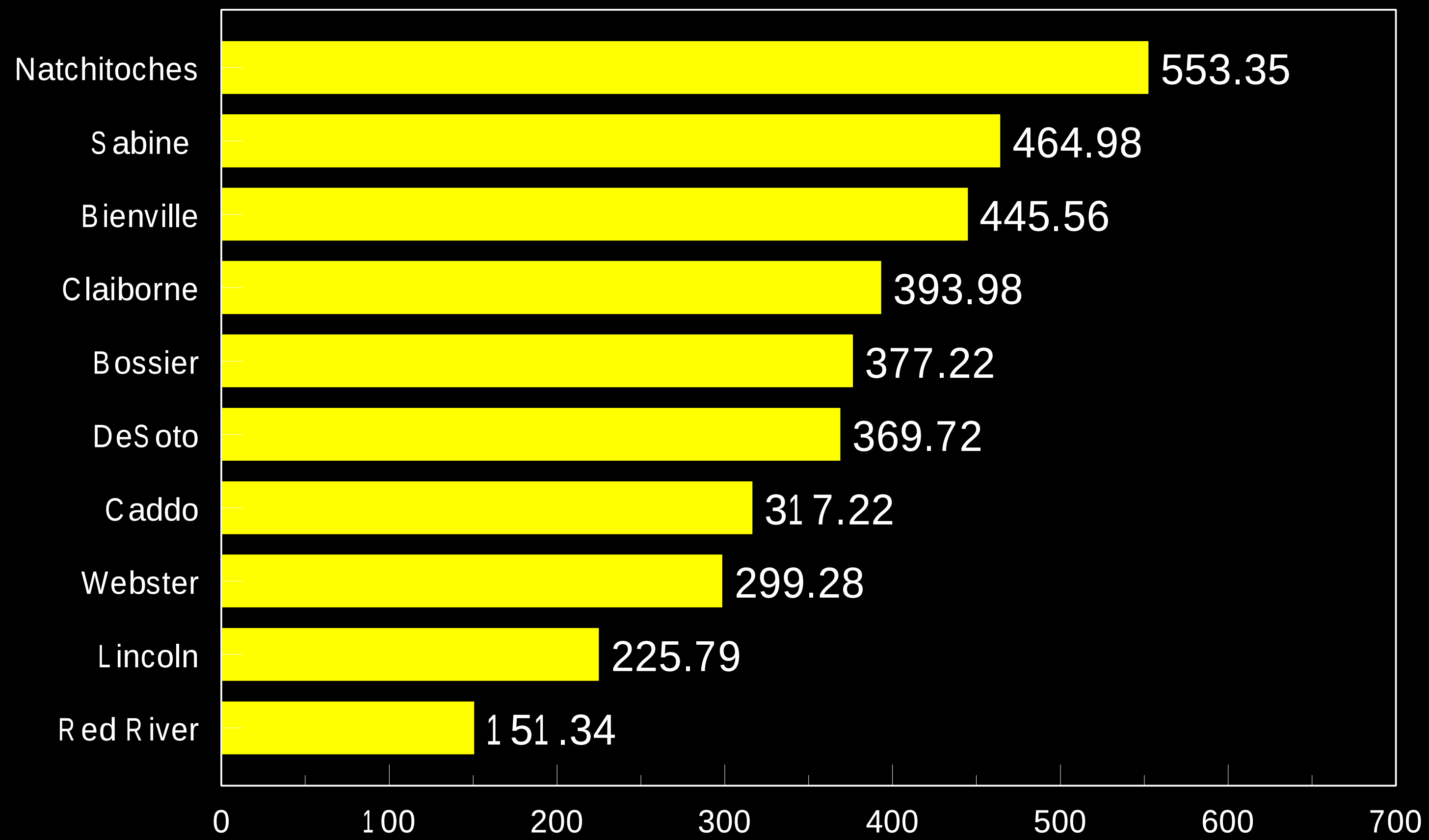


	longleaf/slash	loblolly/shortleaf	oak-pine	oak-hickory	oak-gum-cypress	elm-ash-cottonwood	Total
Lincoln	0.00	104.21	69.47	40.53	11.58	0.00	225.79
Natchitoches	27.45	209.45	116.49	104.09	84.74	11.13	553.35
Red River	5.82	34.92	34.92	29.10	34.92	11.64	151.34
Sabine	6.28	276.47	81.69	75.40	25.13	0.00	464.98
Webster	0.00	132.80	56.30	60.14	50.04	0.00	299.28

1991 Northwest Forestland Area by Parish

Parishes Ranked By Acreage

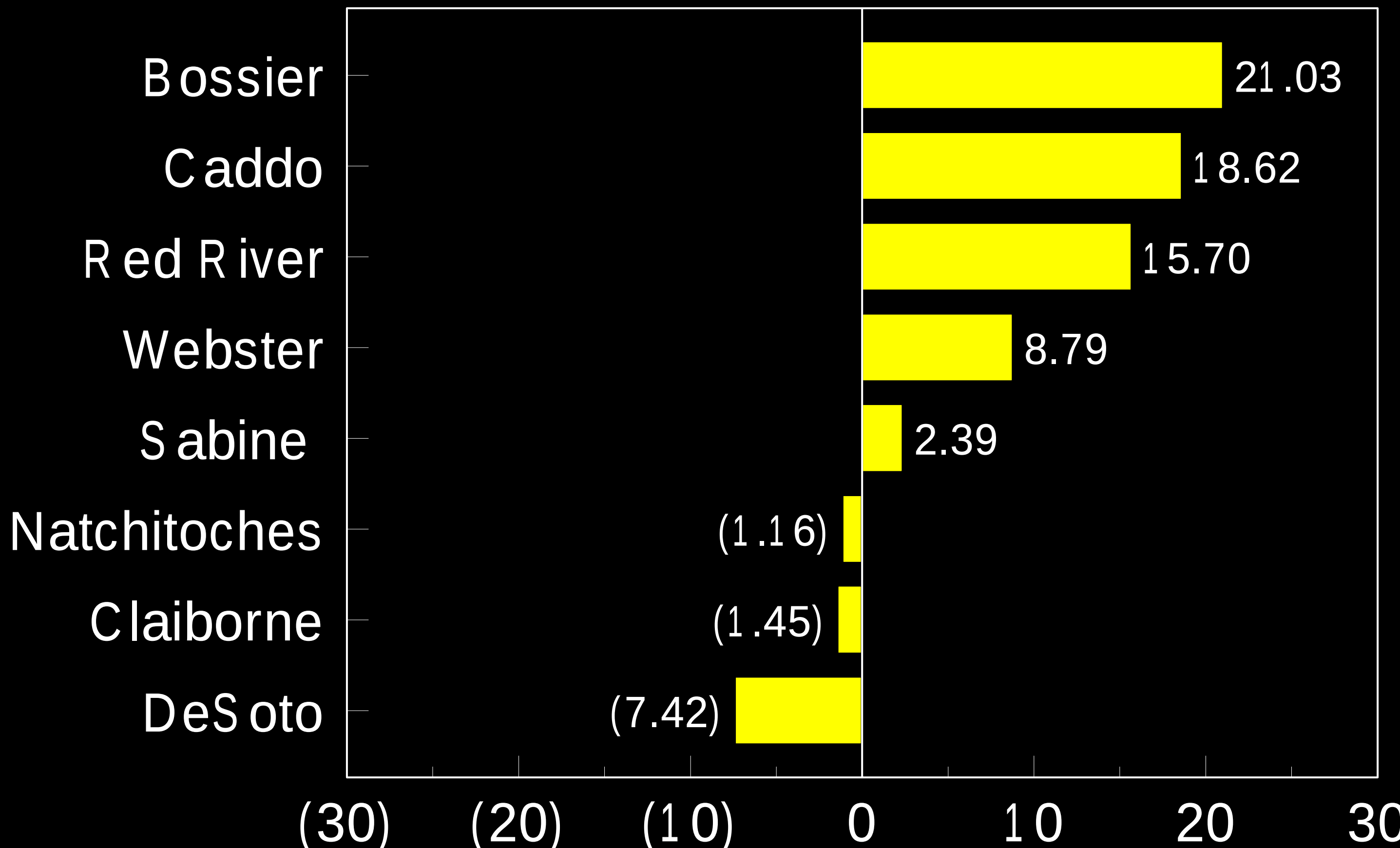
(thousands of acres)



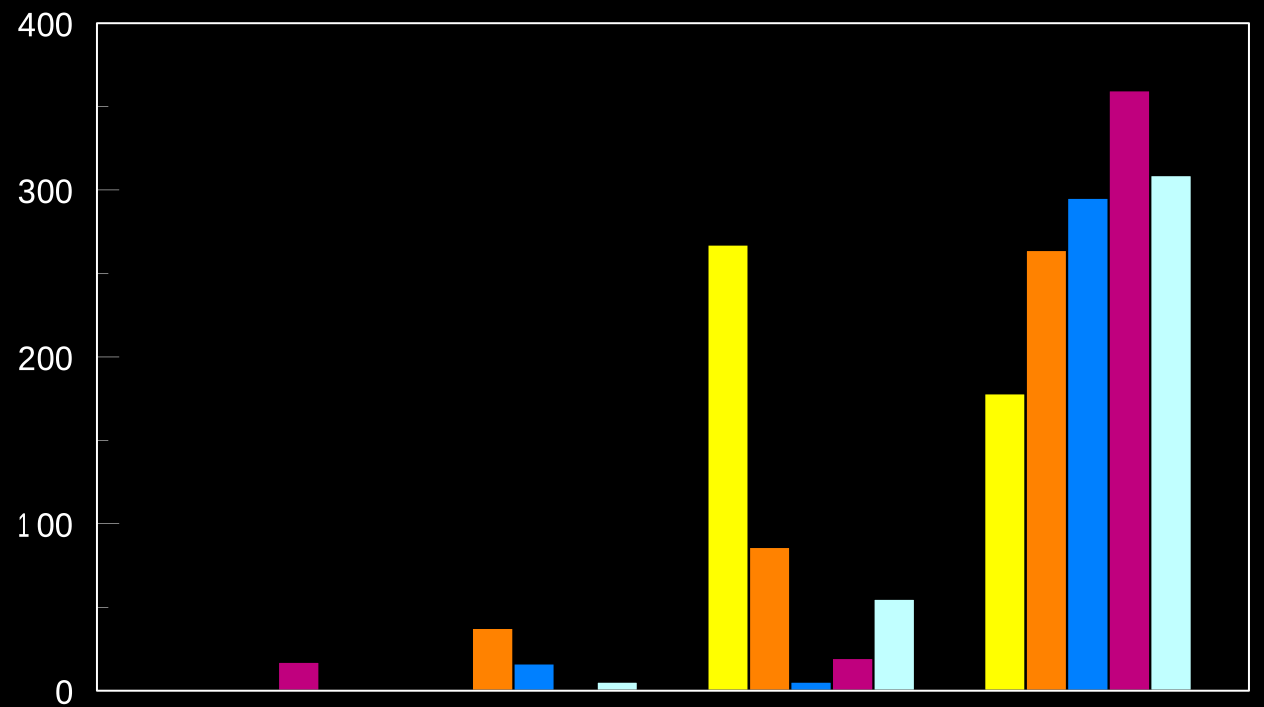
1991 Northwest Forestland Area by Parish

Change in Acreage 1984-1991

(thousands of acres)

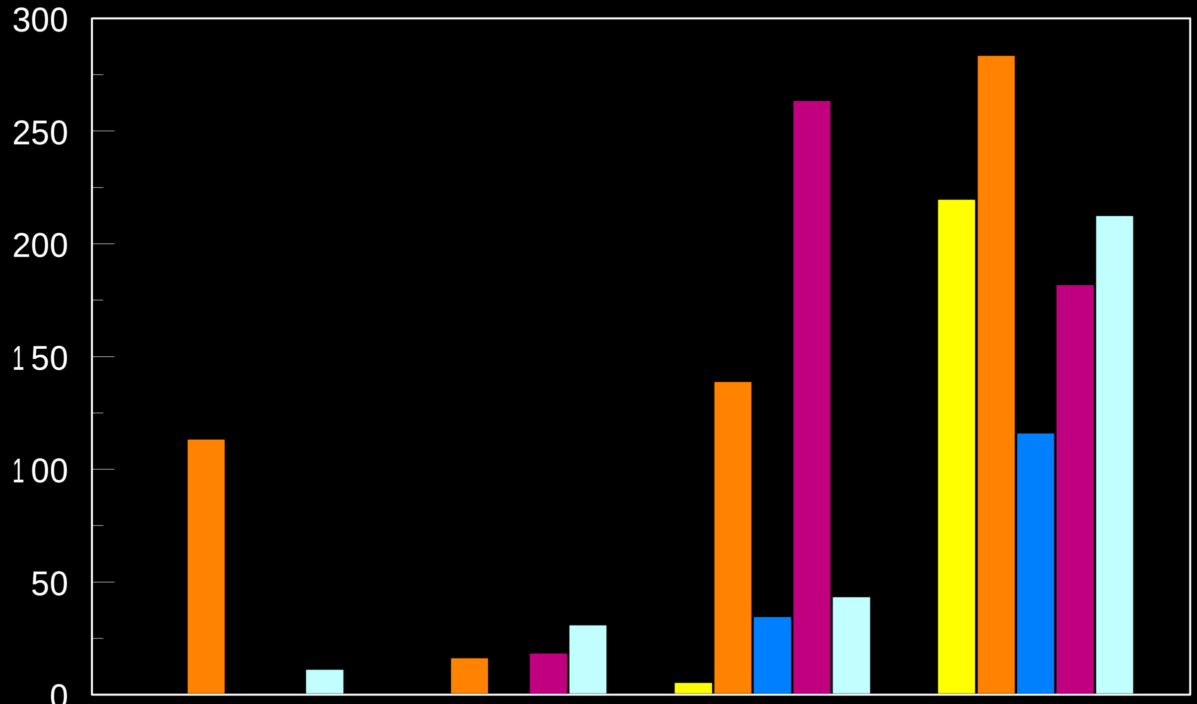


1991 Northwest Timberland Area by Ownership and Unit (thousands of acres)



	National Forest	Other Public	Forest Industry	Private
Bienville	0.00	0.00	267.34	178.23
Bossier	0.00	37.72	86.22	264.05
Caddo	0.00	16.41	5.47	295.34
Claiborne	17.36	0.00	19.63	359.88
DeSoto	0.00	5.52	55.18	309.02

1991 Northwest Timberland Area by Ownership and Unit (thousands of acres)



	National Forest	Other Public	Forest Industry	Private
Lincoln	0.00	0.00	5.79	220.00
Natchitoches	113.71	16.70	139.13	283.82
Red River	0.00	0.00	34.92	116.41
Sabine	0.00	18.85	263.91	182.22
Webster	11.53	31.28	43.79	212.69

1991 Northwest Forestland Area

By Ownership By Parish

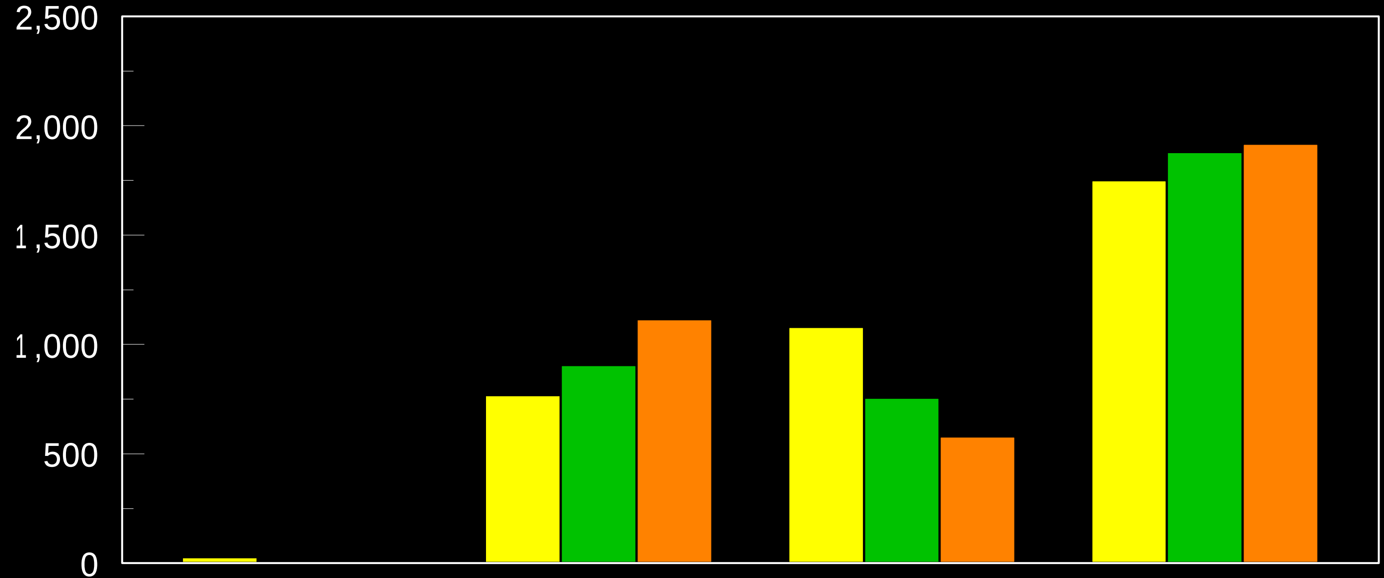
(thousands of acres)

	Nat. Forest	Other Public	Forest Ind.	Private
Bienville	0	0	267	178
Bossier	0	38	86	264
Caddo	0	16	5	295
Claiborne	17	0	20	360
DeSoto	0	6	55	309
Lincoln	0	0	6	220
Natchitoches	114	17	139	284
Red River	0	0	35	116
Sabine	0	19	264	182
Webster	12	31	44	213
Total	**143**	**126**	**921**	**2,422**

1991 Northwest Forestland Area

By Size Class By Year

(thousands of acres)

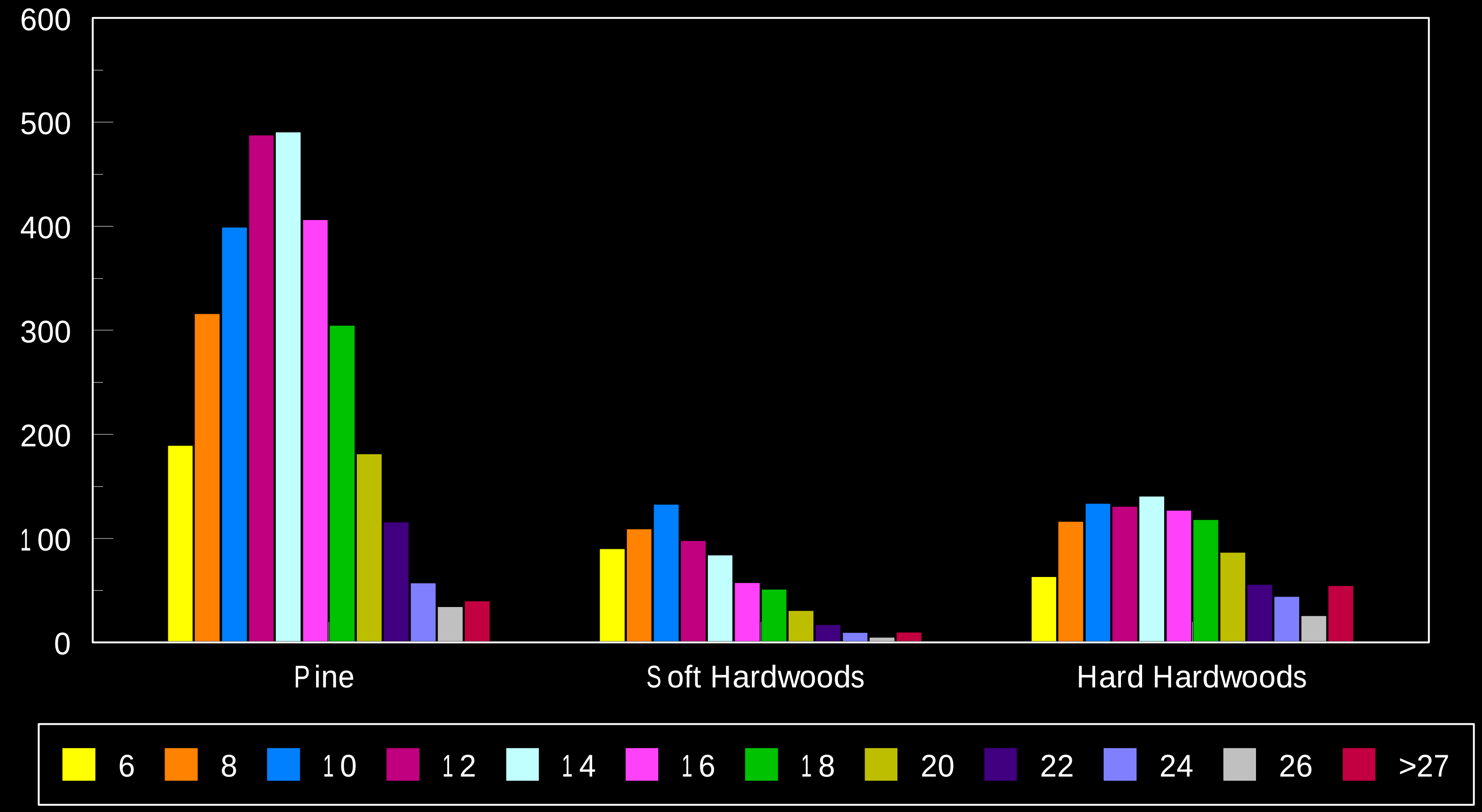


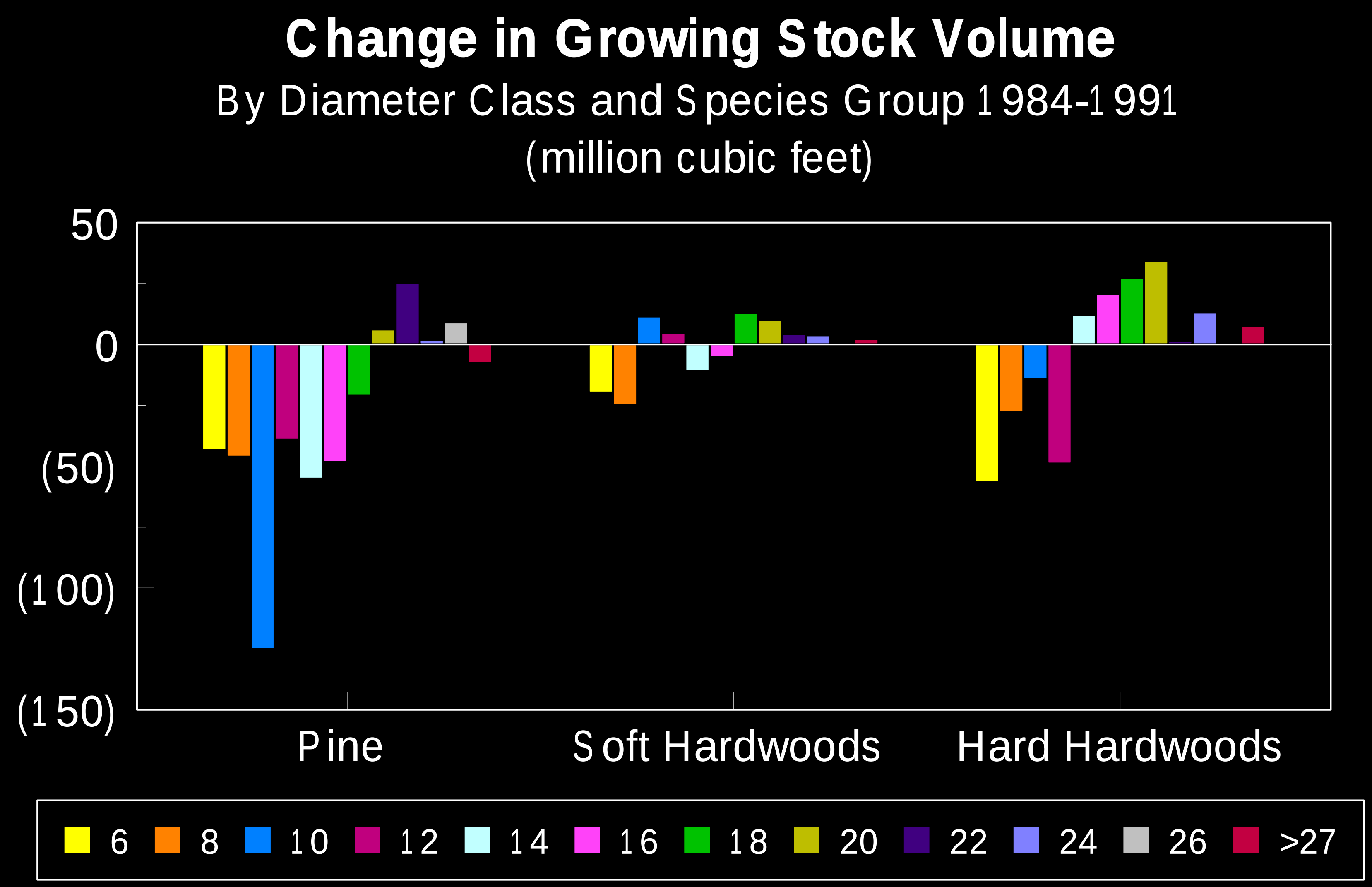
	understocked	seedling/sapling	poletimber	sawtimber
1974	27	768	1,079	1,750
1984	5	905	756	1,880
1991	0	1,115	579	1,918

1991 Growing Stock Volume

By Diameter Class and Species Group

(million cubic feet)

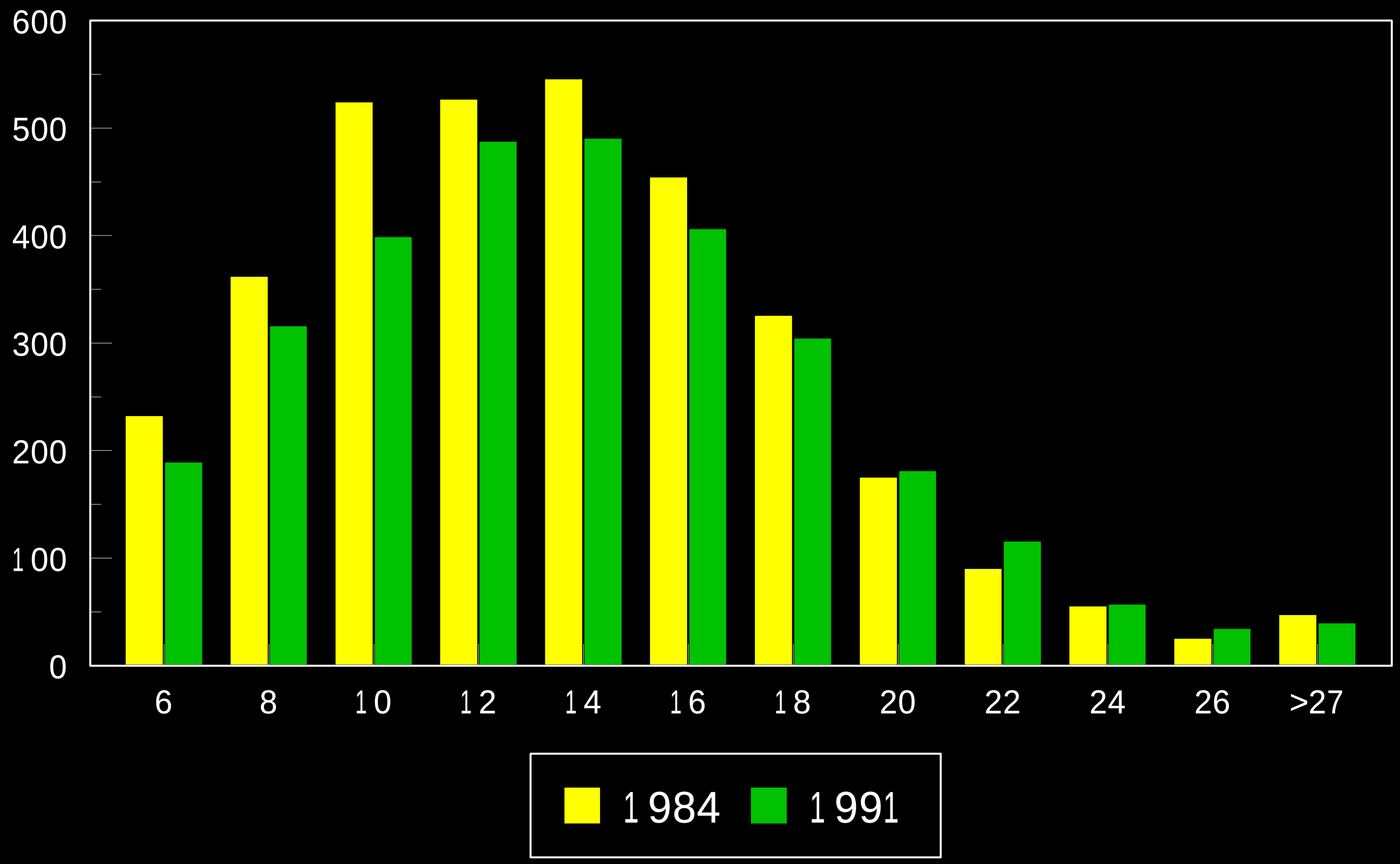



Change in Growing Stock Volume
By Diameter Class and Species Group 1984-1991
(million cubic feet)
50
0
(50)
(100)
(150)
Pine
Soft Hardwoods
Hard Hardwoods
6
8
10
12
14
16
18
20
22
24
26
>27

Change in PINE Growing Stock Volume

By Diameter Class 1984-1991

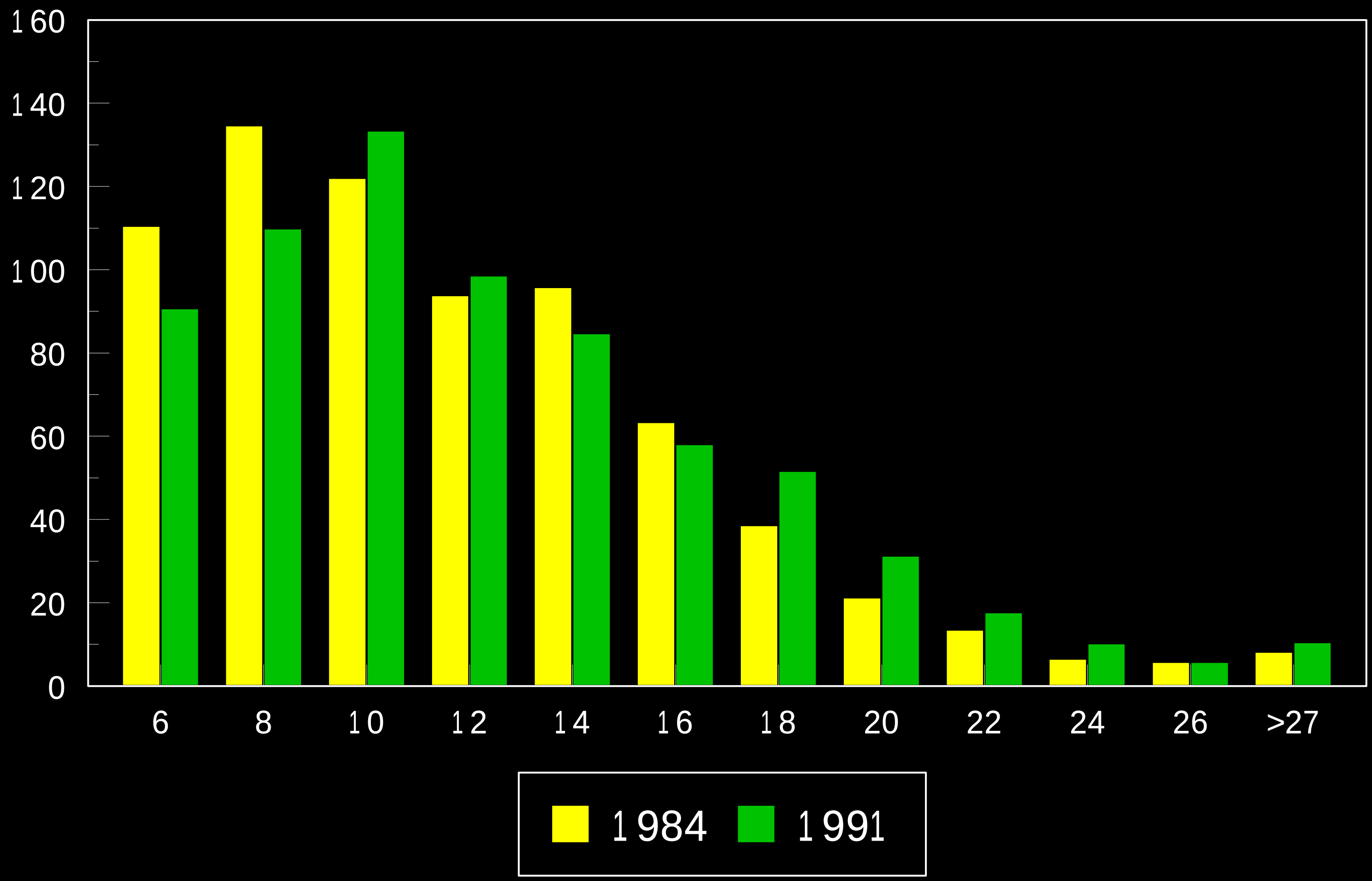
(million cubic feet)



Change in SOFT HARDWOODS Growing Stock Volume

By Diameter Class 1984-1991

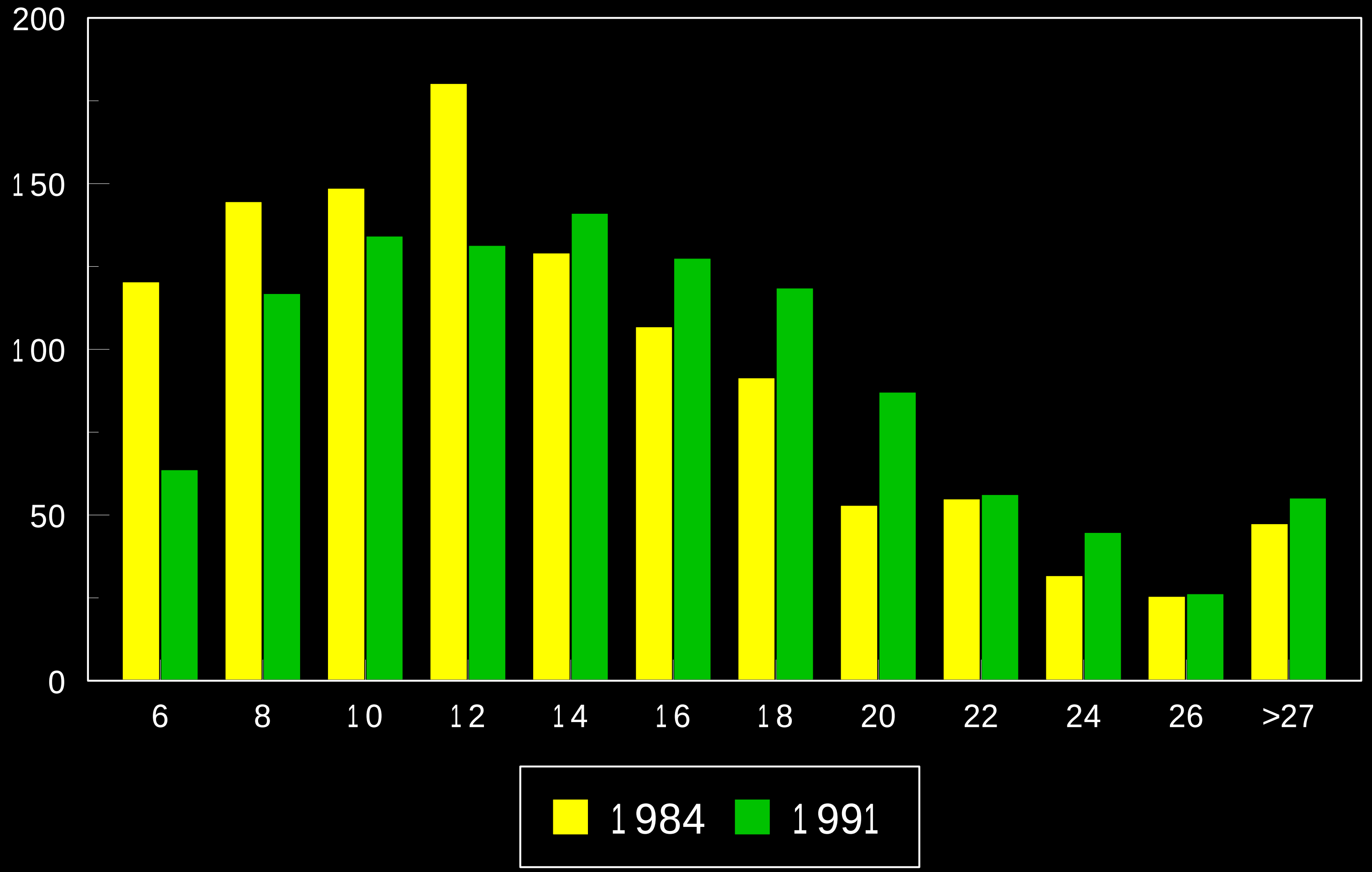
(million cubic feet)



Change in HARD HARDWOODS Growing Stock Volume

By Diameter Class 1984-1991

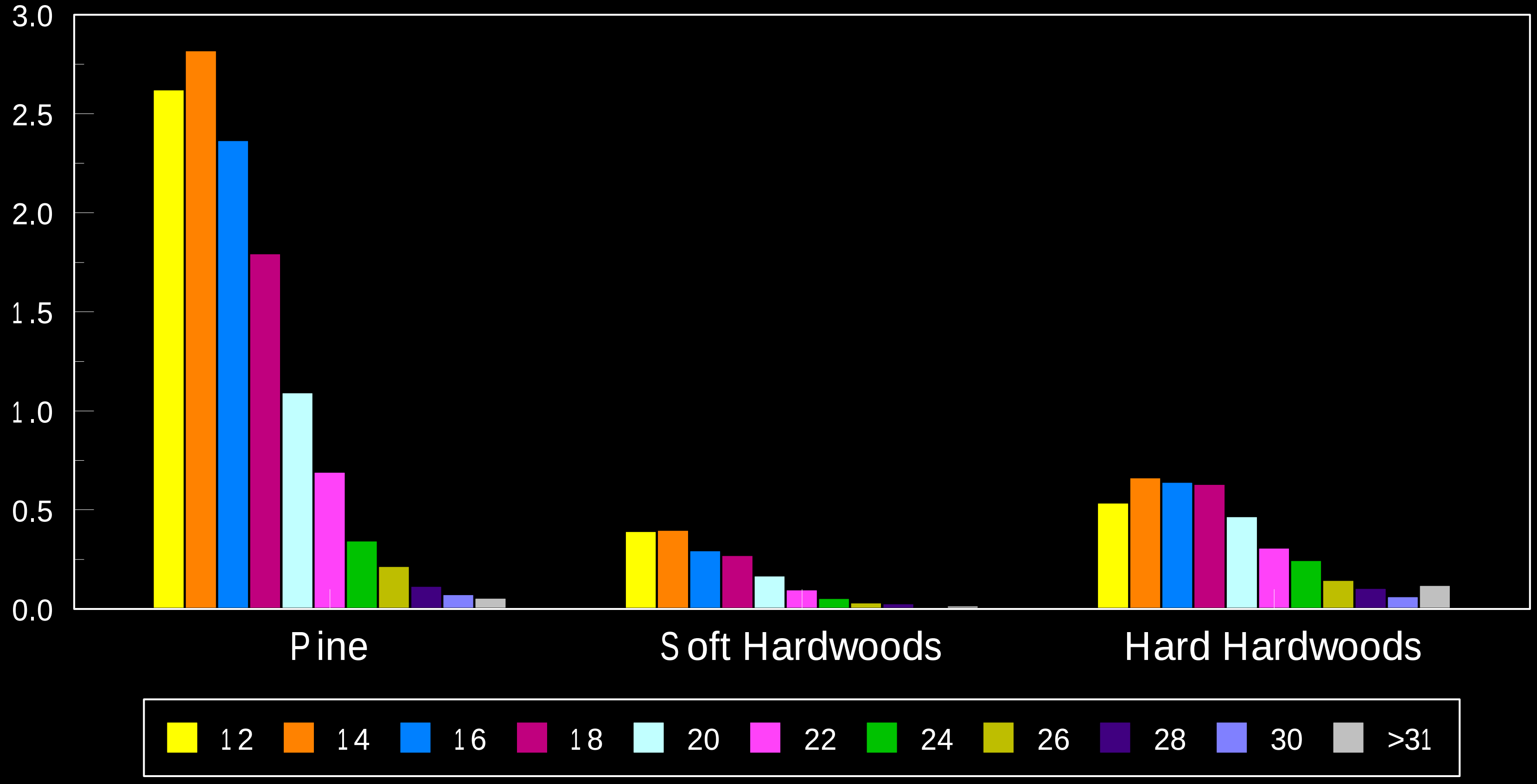
(million cubic feet)



1991 Sawtimber Volume

By Diameter Class

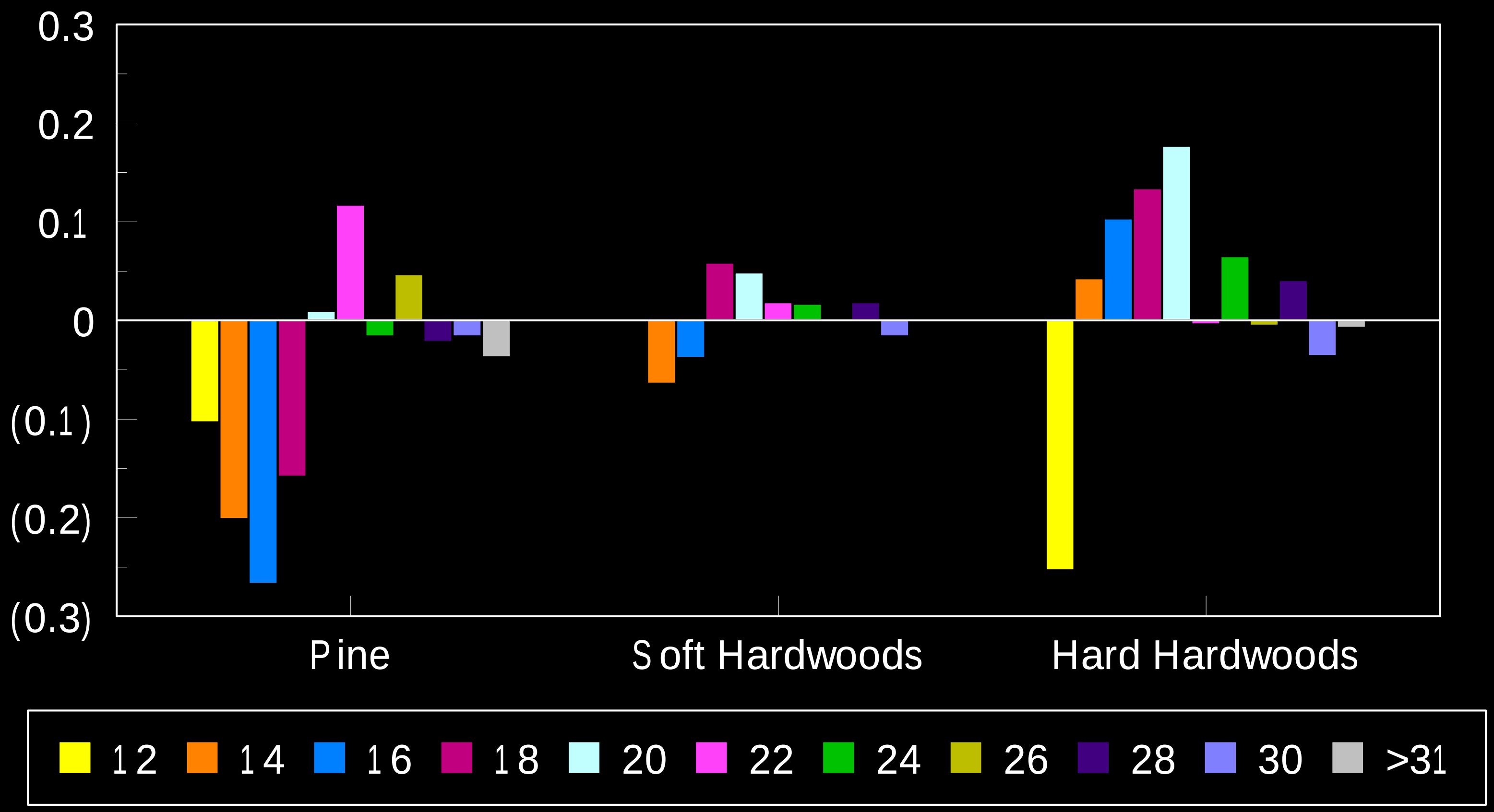
(billion board feet)



Change in Sawtimber Volume 1984-1991

By Diameter Class and Species Group

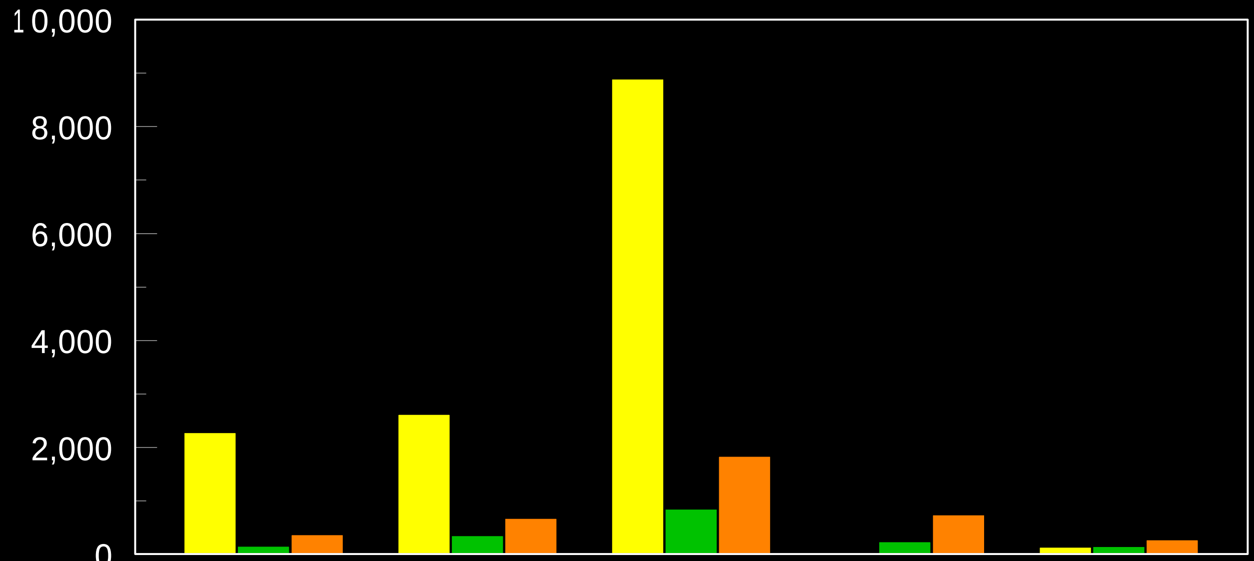
(billion board feet)



1991 Sawtimber Volume by Grade

Total: All Parishes

(million board feet)

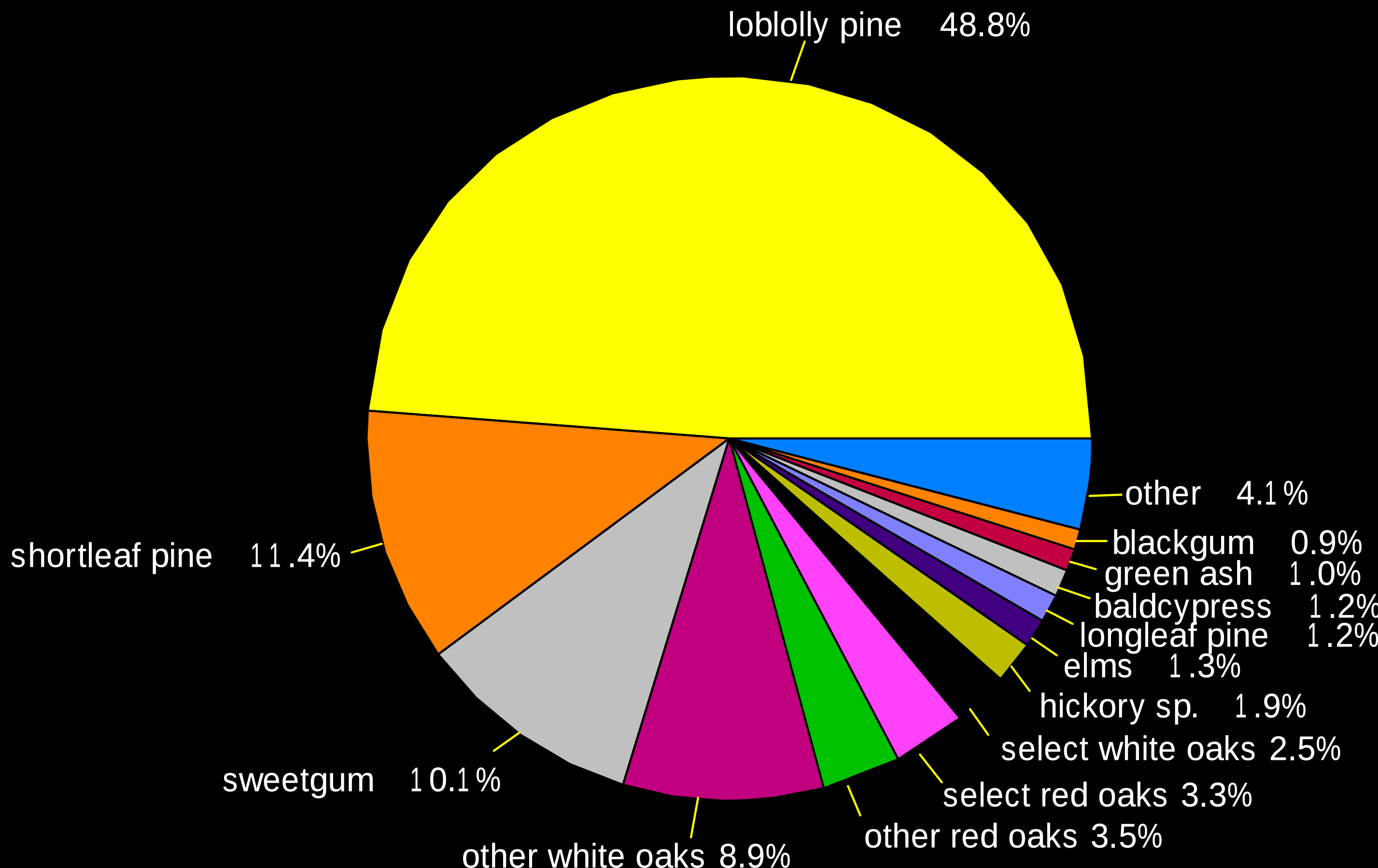


	Tr. Grade 1	Tr. Grade 2	Tr. Grade 3	Tr. Grade 4	Tr. Grade 5
Pine	2,286	2,630	8,907	0	144
Soft Hardwoods	160	361	854	246	158
Hard Hardwoods	379	684	1,847	750	282
Total	2,825	3,675	11,608	996	584

1991 Growing Stock Volume by Species

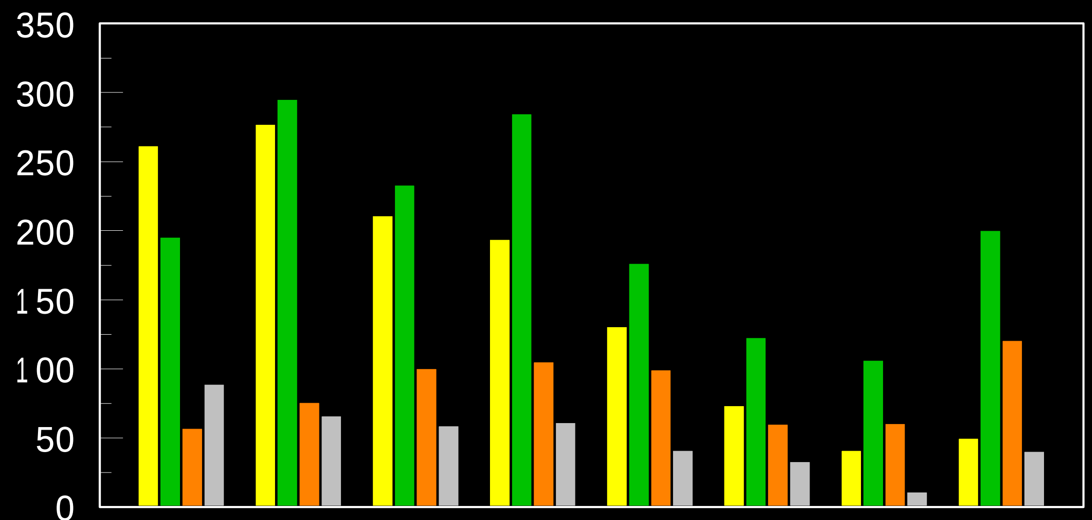
(cubic feet)

Total= 4,842,553,835



1991 Hardwood Sawtimber Volume

By Species and Diameter Class
(million cubic feet)

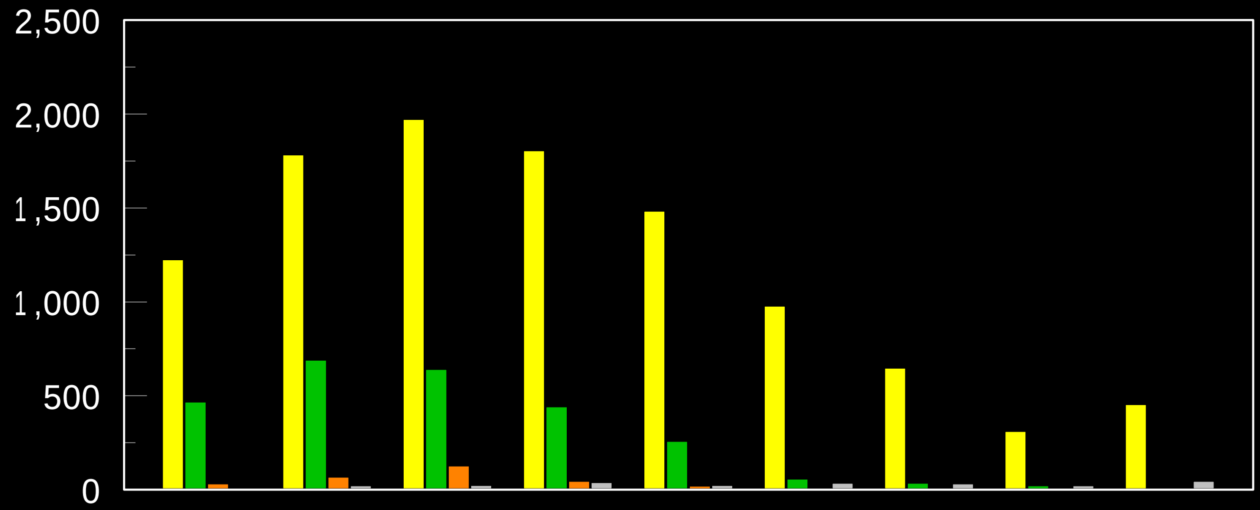


	12	14	16	18	20	22	24	>26
sweetgum	262	278	211	194	131	74	42	50
other white oaks	196	295	234	285	177	123	107	201
select red oaks	57	76	101	106	100	60	61	121
select white oaks	89	67	59	62	41	33	11	41
Total	604	716	605	646	449	291	221	413

1991 Softwood Sawtimber Volume

By Species and Diameter Class

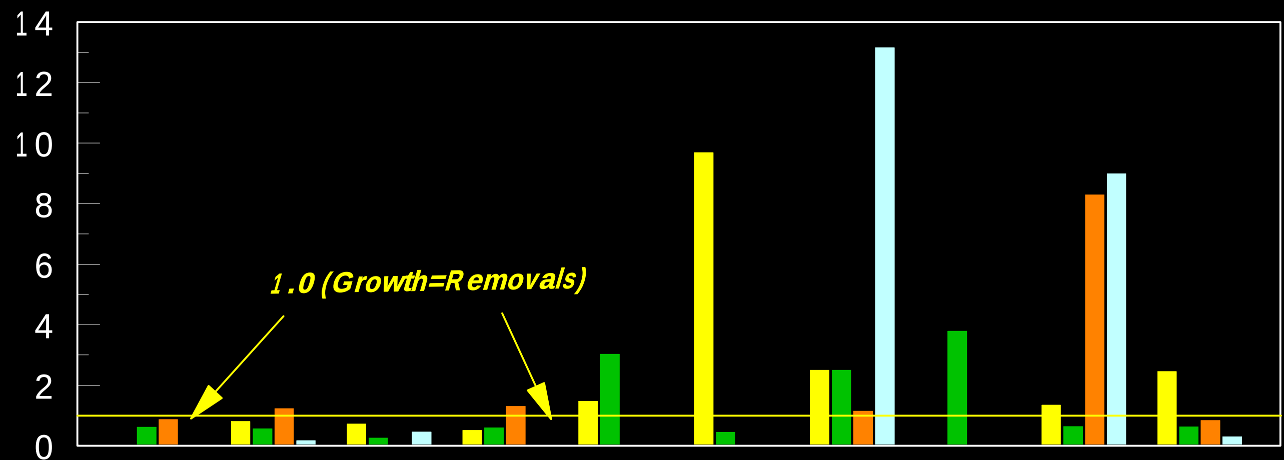
(million cubic feet)



	10	12	14	16	18	20	22	24	>26
loblolly pine	1,227	1,786	1,975	1,809	1,487	981	652	314	457
shortleaf pine	470	694	645	445	262	61	38	24	10
slash pine	35	70	130	49	23	8	3	0	0
bald cypress	7	25	26	41	26	38	34	25	49
Total	1,739	2,574	2,776	2,344	1,797	1,088	727	363	515

1991 Growth/Removal for Hardwood Sawtimber

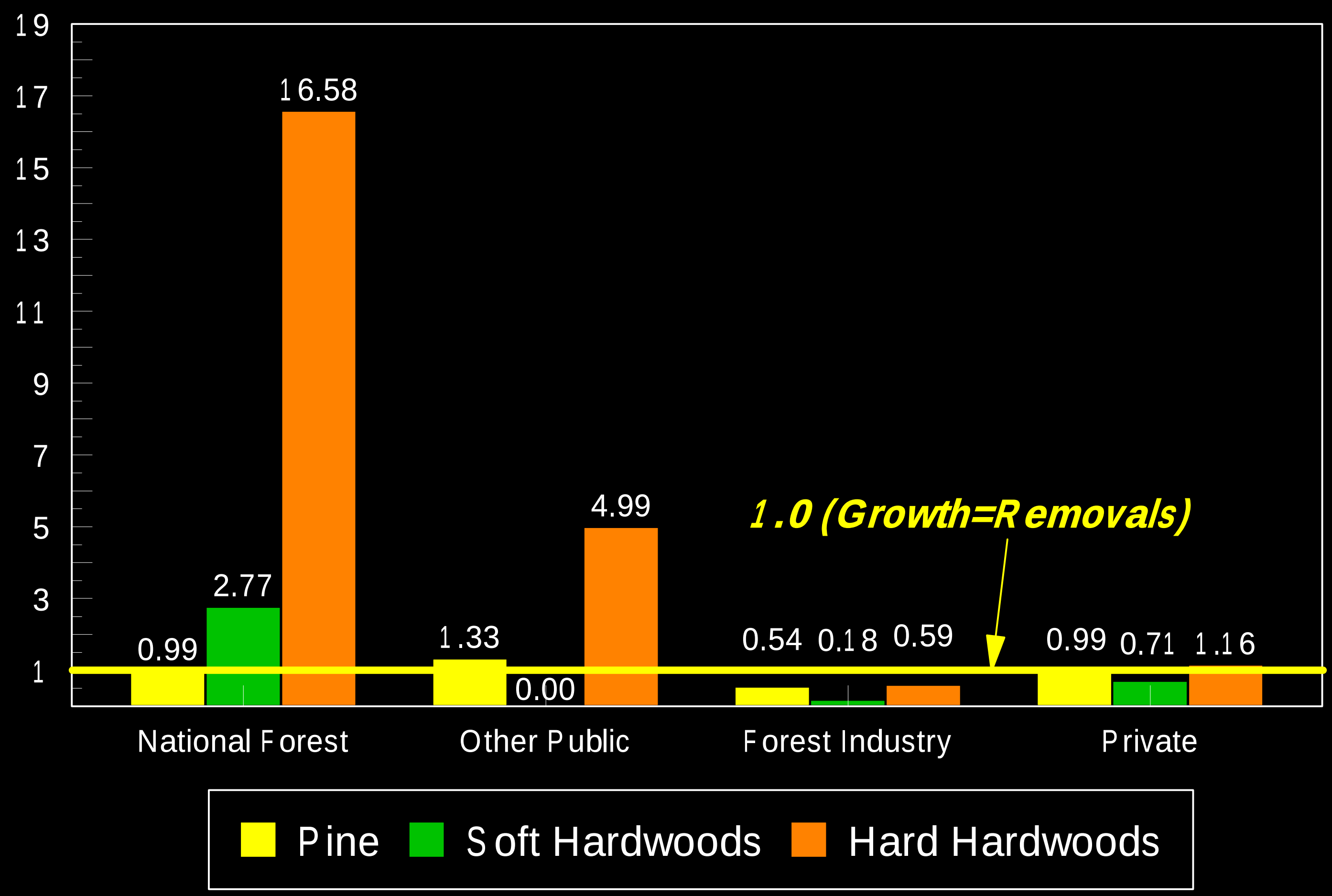
By Species and Parish

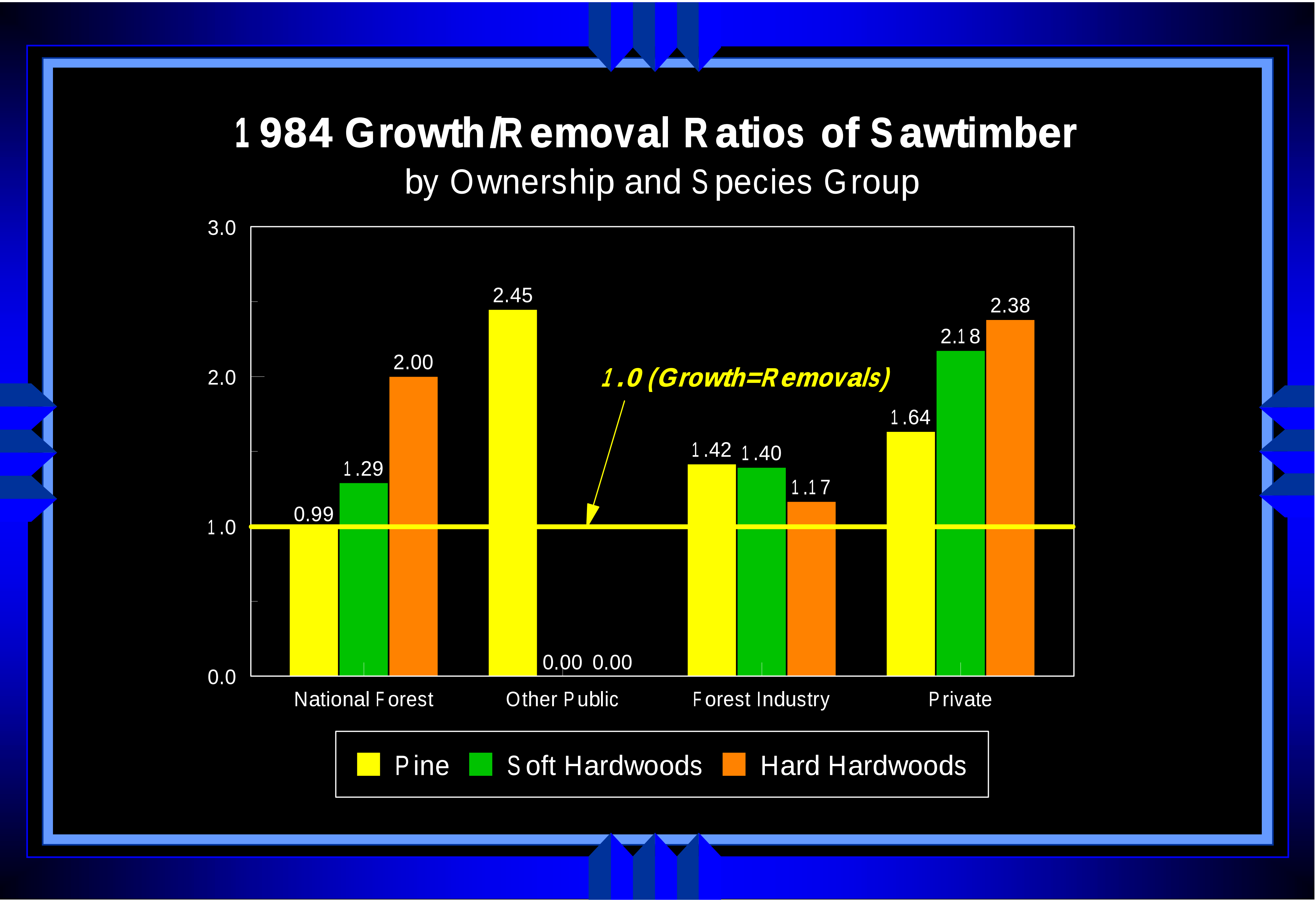


	Bienville	Bossier	Caddo	Claiborne	DeSoto	Lincoln	Natchitoches	Red River	Sabine	Webster
other white oaks	0	0.8	0.8	0.5	1.5	9.7	2.5	0.0	1.4	2.5
sweetgum	0.7	0.6	0.3	0.6	3.1	0.5	2.5	3.8	0.7	0.7
select red oaks	0.9	1.3	0.0	1.3	0.0	0.0	1.2	0.0	8.3	0.9
select white oaks	0.0	0.2	0.5	0.0	0.1	0.0	13.2	0.0	9.0	0.3

1991 Growth/Removal Ratios of Sawtimber

by Ownership and Species Group





1984 Growth/Removal Ratios of Sawtimber
by Ownership and Species Group
3.0
2.0
1.0
0.0
0.99
1.29
2.00
2.45
0.00
0.00
1.0 (Growth=Removals)
1.42
1.40
1.17
1.64
2.18
2.38
National Forest
Other Public
Forest Industry
Private
Pine
Soft Hardwoods
Hard Hardwoods

Industry Structure

- The region's forest product industries represent important job creation opportunities. World demand for products manufactured by the region's companies is increasing. Numerous products are manufactured and are shipped to markets around the nation and world.
- The majority of the secondary forest products companies are small and use relatively standardized manufacturing processes and equipment. These companies are able to compete in the markets they serve by exploiting specialty niches and cutting costs.

Industry Structure

- Demand is especially good for grade hardwood lumber used in flooring, cabinetry, furniture and other high value-added applications. In addition, utility grade hardwood materials are used in many applications including transportation-oriented products and in construction applications.

- Softwoods originating in the area have an almost unlimited application from pulp and paper, cellulose by-products, construction industry applications; domestic and foreign as well as land based and marine applications.

Industry Structure

- The outlook of most managers in the region is for continued market opportunity due primarily to increased scarcity of forest resources in other regions of the US.
- Related to the availability of resources and increased utilization efficiencies is the issue of recycling of currently unusable by-products. The issue of waste utilization was identified as a major issue.

Industry Structure

- Managers are concerned about the availability of qualified labor. There is a lack of training opportunities for new and existing employees.
- Of particular concern is the lack of basic skills and work maturity training in entry-level labor.
- The availability of labor skilled in the maintenance and operation of hydraulic and computer controlled hydraulic systems were identified as critical skills needed in the region by the larger employers.

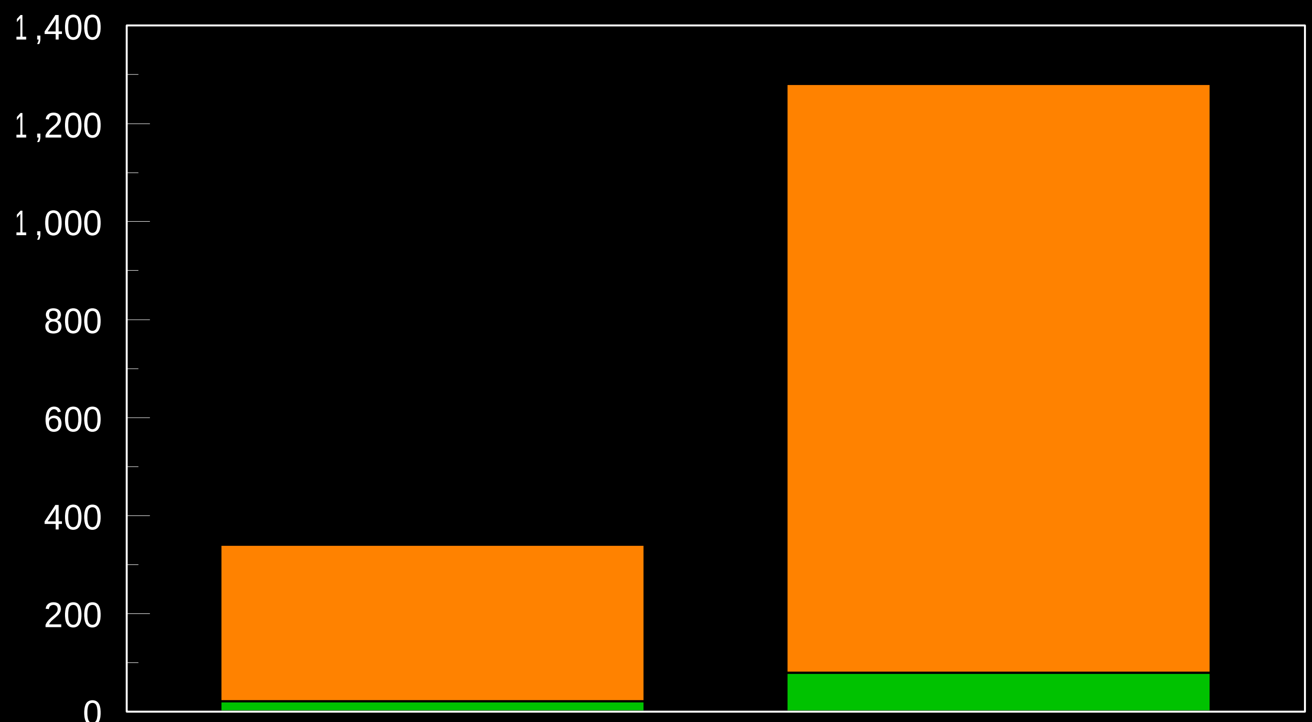
Industry Structure-Issues

- Future dependence on international markets
- The lack of exporting technical assistance or knowledge of sources for such assistance
- Governmental regulation restricting access to public forestlands
- Environmental and administrative regulation controlling harvesting quotas
- Local sales taxes and tax codes
- The complexity of complying with state and federal regulatory requirements
- Lack of local access to sea going containers
- Poor labor quality
- Need to reduce the amount of waste being lost to landfills.

Industry Structure

- The most important factors preventing manufacturing industry development in the region are the cost of workman’s compensation insurance and corporate taxes.
- Focussing on value-added manufacturing in order to create skilled higher paying jobs will require an effort of local and state officials aimed at leveling the playing field with other states in terms of the impact of manufacturing disincentives.
- In addition, legislation aimed at bringing worker’s compensation premiums in line with loss payment decreases was identified as being beneficial.

NW Louisiana Forest Products Industry
Planned Employee Additions in 1997 and 1998-2000
(n=29 companies)



	Respondents	Extrapolated
1997	21	79
1998-2000	320	1,202
Total Emp. Additions	341	1,281

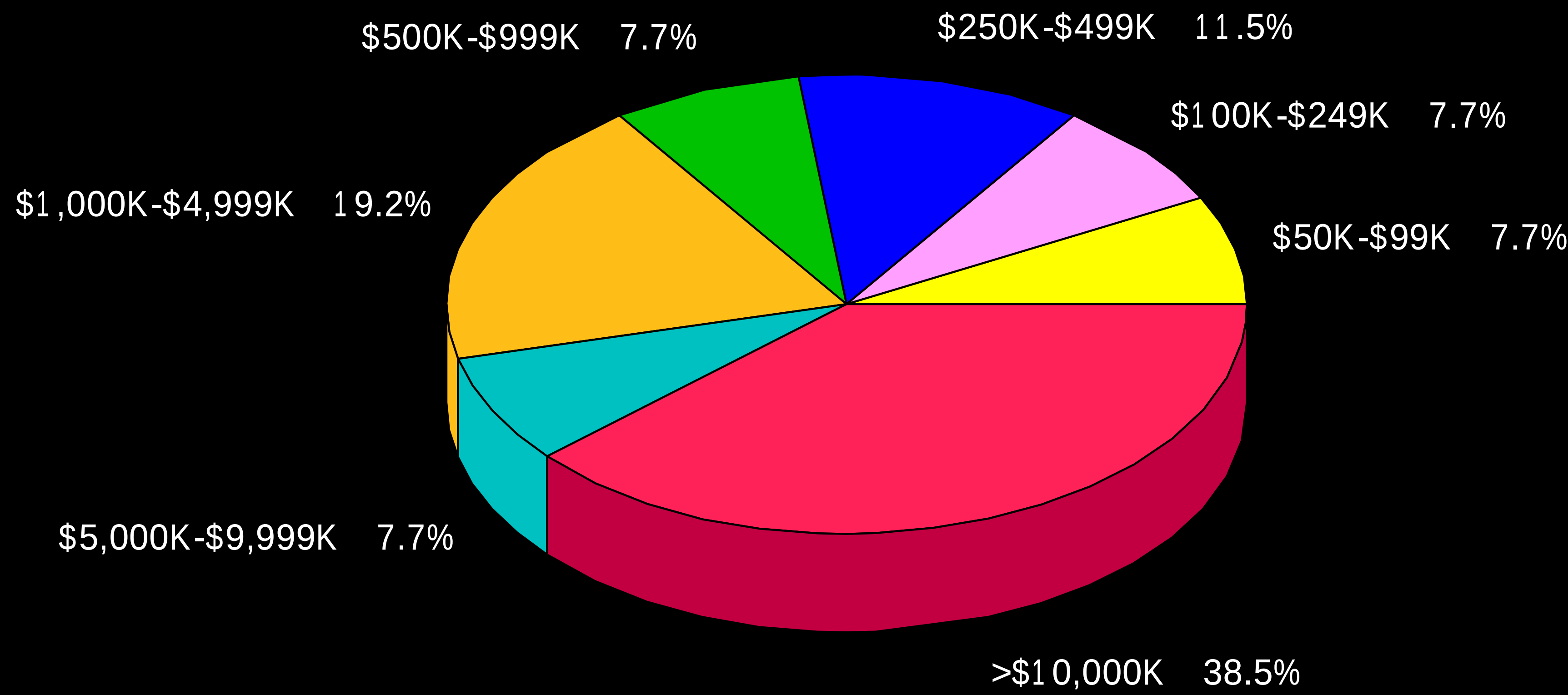
NW Louisiana Forest Products Industry
Employees by Category in 1997

(n=29 companies)

Production	4,425
Administrative	521
Total Employees	4,946

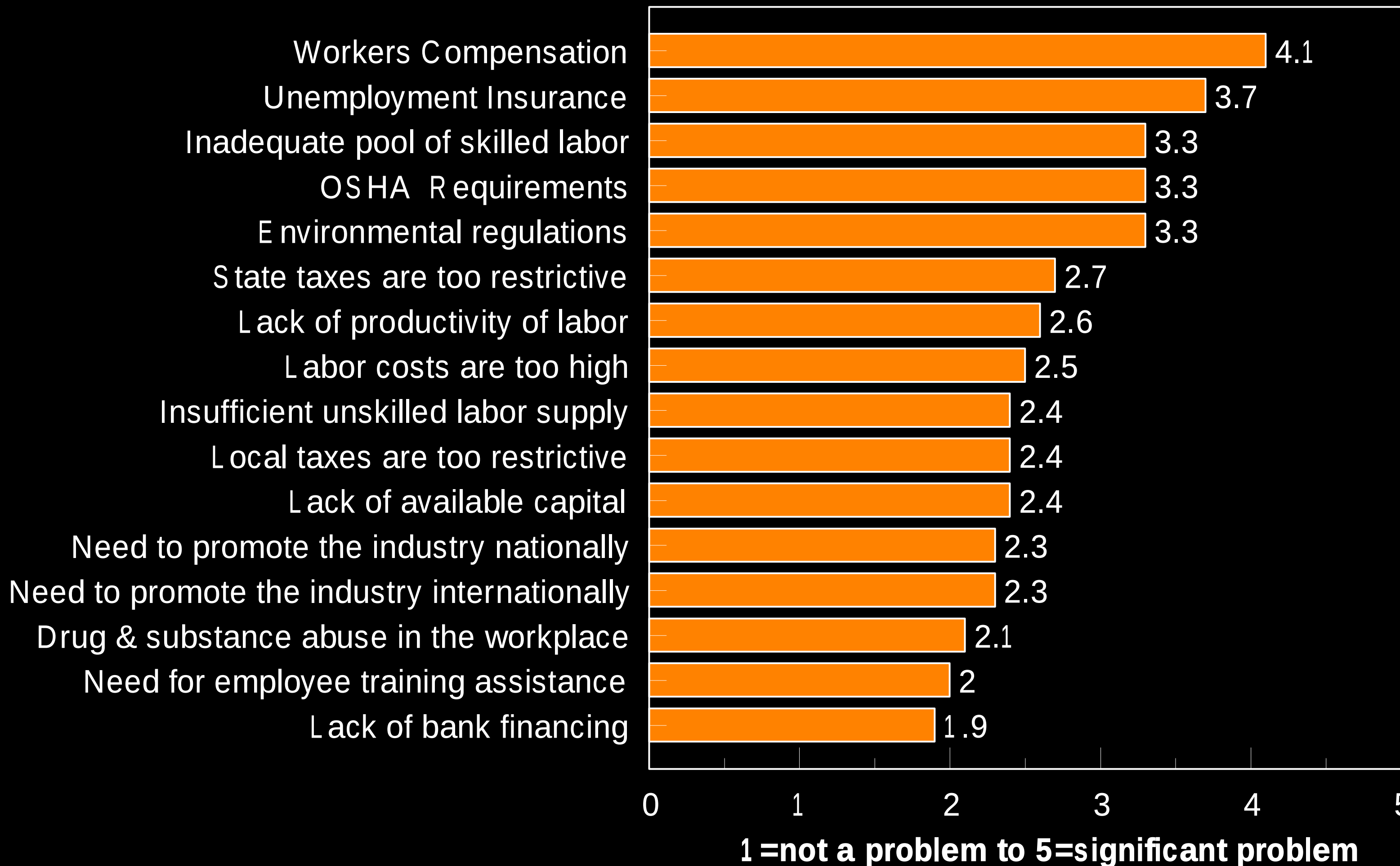
NW Louisiana Forest Products Industry
Company Size by Sales Category

(n=29 companies)



NW Louisiana Forest Products Industry
Factors That Hinder Ability to Compete

(n=29 companies)



Market Assessment

- The study region is faced with several unique opportunities to pursue future development of the secondary forest products industry. Seven commercial timber species have been identified with moderate to high commercial value.
- Southern pine raw materials of desired timber size and quality will continue to decrease as more pressure is placed on the region to replace anticipated production declines in the Northwest. This indicates a need to add more value to the existing resource.
- Hardwood supplies should remain stable provided no major industrial market developments are made.

Market Assessment

- Opportunities exist for small and midsize firms to produce intermediate and final products. Examples include dimension stock, millwork, timber laminating, end- and edge-gluing and surface overlaying.
- Market niches will emerge to meet market needs by providing additional value-added production or services.
- Where possible, integration of businesses into informal and formal networks will provide smaller companies with the ability to compete and will provide larger companies with the ability to change quickly to meet market needs.

Market Assessment

- Product group opportunities with potential for growth and expansion include hardwood wood components, ready-to-assemble furniture, architectural millwork, hardwood flooring and treated softwood value-added products. Beyond these broad product groups, there are likely to exist niche opportunities for a number of wood products.

- On a limited geographical market basis, household furniture and cabinets have a moderate competitive environment and market attractiveness, particularly in niche markets. These segments should be targeted for selective investment where risk is minimized.

Market Assessment

- Ready-to-assemble (RTA) furniture is growing and maturing as a product line. It does not look like RTA anymore. Many pieces are difficult to tell from traditional goods. RTA shipments in the United States are forecasted to grow by more than 10 percent annually over the next two to three years.

- Larger furniture manufacturers are most concerned with having an available, trainable labor force, while smaller manufacturers look for an existing supply of skilled labor. Technical assistance in the area of training is valued by both.

Market Assessment

- Important factors in selecting a site for furniture manufacturing plants are distribution/transportation and access to raw materials.
- The primary form of transportation of concern to manufacturers is trucking, therefore, a potential location is considered attractive if it provides good access to major North/South and East/West highways and major trucking lines.
- Although proximity to raw materials is important to both large and small manufacturers, it is more critical to smaller manufacturers.

Hardwood Wood Components

Factor	*Weight (1-10)*	*Rating (1-10)*	*Score Weight x Rating*
raw material availability	10	8	80
available markets (local, regional, national or global)	8	8	64
market growth rate	7	8	72
competitive factors	8	8	64
provides employment opportunities	10	7	70
distribution infrastructure exists or can be developed	7	8	56
available workforce	10	6	60
TOTAL		53	450/600=75 %

Summary Criteria Evaluation for Major Product Groups

Product Sector	Score Sum of Ratings	Weight x Rating/ Total Possible Score
Hardwood Wood Components	53	75%
Ready-To-Assemble Furniture	52	74%
Architectural Millwork	50	72%
Treated Products	50	72%
Household Furniture	45	65%
Hardwood Flooring	42	61%
Cabinets	39	57%

Market Strategy Map

Competive Strength

Market Attractiveness

	STRONG	MODERATE	WEAK
HIGH	***Extend Position***	***Invest to Build*** • Hardwood Wood Components • RTA Furniture	***Build Cautiously*** • Hardwood Flooring
MEDIUM	***Build Selectively***	***Invest Selectively*** • Architectural Millwork • Treated Products	***Limit Expansion*** • Household Furniture • Cabinets
LOW	***Protect & Refocus***	***Harvest***	***Divest***

Economic Impacts

- The potential of the value-added forest products industry has been increasing as a means of facilitating economic development. The value-added forests products industry has the potential for supporting economic growth in rural areas of Louisiana.

- Results of an economic model of the ten parishes in the study region indicate that growth in the sector would make a fairly substantial contribution to overall economic activity in the region. Results also indicate that development of the industry may be an appropriate way to create economic opportunities for lower income households.

Economic Impacts

- Output multipliers of particular interest for this study include the $1.96 change in total regional output for a $1.00 change in sales by Kitchen Cabinets and Millwork, the output multiplier of $2.18 for Structural Wood Members, the output multiplier of $2.17 for Wood Preserving, the output multiplier of $1.87 for Furniture, and the output multiplier of $1.90 for Wood Partitions.

- Output multipliers for three of the five value-added forests products industries were among the top five industrial sectors in terms of output multipliers out of seventeen sectors analyzed.

Economic Impacts

- For four of the five value-added forests products industries, multipliers for low income household were larger than average.

- This result implies that growth in the five industries may be especially beneficial to low income households. Among the five sectors, Kitchen Cabinets at $0.23, Structural Wood Members at $0.19, Furniture at $0.23, and Wood Partitions at $0.22 had larger than average increases for low income level households.

Economic Impacts

- Total sales by the top five value-added industries were estimated to equal $95.91 million in 1993.
- A 100 percent increase in industry output was projected to lead to a $202.65 million increase in economic activity in the regional economy and an increase of 2,264 new jobs.
- For a 25% increase, the direct change in output was $23.98 million while the total change in output in the regional economy was $50.66 million.   The increase in total regional employment was expected to be 566 jobs.