Accidents in the Primary & Secondary Forest Products Industry in Louisiana: Points to Consider for a Safety Program

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Accidents in Forest Products Industry

- Accident Statistics
  - Primary industry
  - Secondary industry
  - Logging

- Logging – OSHA Strategic Partnership Agreement in Louisiana

- Some recent Research
Forest Products Industry

- **Primary**
- **Secondary**
- **Logging**
Serious Injuries (Primary Industry)

Number of Serious Accidents (>7 Days Lost Time) per Year (1986-1998)

- 2631 Paperboard Mills
- 2621 Paper Mills
- 2436 Softwood Plywood
- 2435 Hdwd Veneer & Ply
- 2426 Hardwood Sawmills
- 2421 Sawmills
Number of Serious Injuries (Secondary Industry)

Number of Serious Accidents ( > 7 Days Lost Time ) per Year (1986-1998)

- 25 Furniture
- 249 Preserving, Particleboard, OSB
- 245 Prefab Homes
- 244 Pallet & Containers
- 2434 Cabinets
- 2431 Millwork

Number of Serious Injuries:
- 0
- 5
- 10
- 15
- 20
- 25
- 30
Trends: Number of Accidents

- Logging
- Primary
- Secondary
Recordable Accident Rates

OSHA Recordable Rates for USA (1986-1998)

2411 Logging
2421 Sawmills
2426 Hardwood Sawmills
2435 Hdwd Veneer & Ply
2436 Softwood Plywood
2431 Millwork
2631 Paperboard Mills
2621 Paper Mills
2434 Cabinets
244 Pallet & Containers
245 Prefab Homes
249 Preserving, Particleboard, OSB
25 Furniture
249 Preserving, Particleboard, OSB
245 Prefab Homes
244 Pallet & Containers
2434 Cabinets
2431 Millwork
2631 Paperboard Mills
2621 Paper Mills
2436 Softwood Plywood
2435 Hdwd Veneer & Ply
2426 Hardwood Sawmills
2421 Sawmills
2411 Logging
Logging Accident Rates per 100 Employees

U.S.A.  
Louisiana  
La. > 7 Days  
Oregon

Sources of Data

- Louisiana Dept. of Labor
  - Office of Workers’ Compensation
- Form 1007, Employer’s First Report of Injury
- Form 1003, Notice that Compensation Payments Have Been Stopped
- Form 1011, Request for Compromise or Lump Sum Payment
Nature of Injury

**Primary**
- Sprains/Strains: 39%
- Fracture: 17%
- Amputations: 2%
- Cuts: 12%
- Hernia: 3%
- Other: 4%
- Contusions: 14%
- Abrasion: 1%

**Secondary**
- Sprains/Strains: 41%
- Fracture: 10%
- Amputations: 3%
- Illness: 6%
- Burns: 2%
- Contusions: 13%
- Abrasion: 2%
- Cuts: 18%
What Gets Hurt?

**Primary**
- Upper extremities: 24%
- Trunk: 13%
- Body systems: 2%
- Neck: 1%
- Multiple: 10%
- Lower extremities: 24%
- Head: 5%

**Secondary**
- Back: 21%
- Upper extremities: 24%
- Trunk: 33%
- Body systems: 2%
- Neck: 1%
- Multiple: 10%
- Lower extremities: 24%
- Head: 5%
Type of Accident

**Primary**
- Bodily exertion: 29%
- Caught in: 14%
- Exposure: 5%
- Falls: 17%
- Assault: 1%
- Transport: 3%
- Struck by: 1%
- Rubbed/pressure: 1%

**Secondary**
- Body exertion: 34%
- Caught in: 13%
- Expos: 3%
- SBSA: 30%
- Rubbed: 1%
- Falls: 14%
- Vehicular: 3%
Exertion

Primary

- Lifting: 41%
- Pulling: 31%
- Holding: 10%
- Body Reaction: 11%
- NEC: 3%
- Over-exertion: 4%

Secondary

- Lifting: 59%
- Pulling: 19%
- Holding: 8%
- Body Reaction: 7%
- NEC: 3%
- Over-exertion: 4%
Source of Injury

**Primary**
- Parts & Material: 34%
- Machines: 11%
- Furniture / Fixtures: 3%
- Container: 1%
- Chem: 3%
- Plants / Animals: 6%
- Containers: 8%
- Other: 5%

**Secondary**
- Parts & Materials: 24%
- Structures / Surfaces: 19%
- Chemical: 3%
- Furniture / Fixtures: 3%
- Vehicles: 5%
- Machines: 15%
- Tools: 8%
- Trees: 2%
- Other: 4%
Parts & Materials (Secondary Industry)

- Building material: 9%
- Wood, NEC: 22%
- Dimen- sional Lumber: 29%
- Plywood: 6%
- Lumber: 11%
- Ropes: 13%
- Wood Pieces: 1%
- Metal: 9%
Seniority of Logger

- 1 - 3 Months: 26%
- 1 - 3 Years: 17%
- 4 - 6 Months: 10%
- 7 - 11 Months: 10%
- 1 - 3 Years: 20%
- 4 - 5 Years: 6%
- 6 - 10 Years: 6%
- 11+ Years: 5%
- 1 Month: 6%
Extra Caution

- Unusual Situations
- Maintenance
Costs
Cost by Nature of Injury

- Other: $7,800 Medical, $12,000 Total
- Strain/Sprain: $8,000 Medical, $12,200 Total
- Abrasion: $1,200 Medical, $4,400 Total
- Fracture: $5,100 Medical, $10,400 Total
- Laceration: $2,100 Medical, $3,800 Total
- Crush: $900 Medical, $7,300 Total
- Burns: $2,400 Medical, $3,000 Total
- Amputation: $2,400 Medical, $3,800 Total

Red bars represent Medical costs, and blue bars represent Compensation costs.
Lost Workdays by Nature of Injury

<table>
<thead>
<tr>
<th>Injury Type</th>
<th>Avg. Lost Work Days</th>
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<tbody>
<tr>
<td>Other</td>
<td>200</td>
</tr>
<tr>
<td>Multiple</td>
<td>196</td>
</tr>
<tr>
<td>Sprain/Strain</td>
<td>182</td>
</tr>
<tr>
<td>Fracture</td>
<td>161</td>
</tr>
<tr>
<td>Dislocation</td>
<td>102</td>
</tr>
<tr>
<td>Laceration</td>
<td>80</td>
</tr>
<tr>
<td>Contusion</td>
<td>65</td>
</tr>
<tr>
<td>Amputation</td>
<td>102</td>
</tr>
</tbody>
</table>
Conclusions

- Newest workers have the most injuries.
  - New worker training is very important.
- Fractures & Strains/Sprains = most common
- Fractures & Strains/Sprains = most expensive & longest recovery time.
Conclusions (cont’d)

The rate of serious accidents is decreasing, but the injuries are getting more serious.
Conclusions (cont’d)

🌟 Truck drivers get hurt a lot, too.
Cooperation – Award from the Assistant Secretary of Labor for OSHA

- US Gov’t
- State Gov’t
- Industry
- Association
- Academia
FATALITIES

Louisiana Logging

- 1999-2000 – 8 deaths
- 2001 – 1 death
- 2002 – 1 death
- 2003 – 3 deaths
- 2004 – 1 death
- 2005 – 3 deaths
OSHA -- LA Logging Council
Strategic Partnership Agreement

- 2004 – 242 logging companies signed up.
- 82% reported no accidents.
OCCUPATION 2004

- LABORER: 4%
- BOSS: 4%
- FALLER: 4%
- TRUCK DRIVER: 20%
- SKIDDER OPERATOR: 8%
- FELLER OPERATOR: 16%
- SAW HAND: 36%
- LOADER OPER: 8%
- TRUCK DRIVER: 20%

Occupation
Event
1998-1999

Falls: Mostly Mounting & Dismounting

Falls
Struck By / Struck Against
Mount / Dismount
Other
Event - Truck Drivers Only - 2003

- Fall: walking (25%)
- Binding load: 25%
- Highway accident: 0%
- Mounting: 50%

Event - Truck Drivers Only - 2004

- Setout: 17%
- Binding load: 33%
- Fall: walking (17%)
- Mounting: 0%
- Highway accident: 33%
Summary from Strategic Partnership

- Repair & Maintenance
- Uncommon tasks -- Repair, grab saw.
- Age
- Improvement in mounting/dismounting equipment.
- Load binders
- Highway Accidents
Partnership Summary, Cont’d

- PPE
- Workspace
- Communication
Partnership Summary, Cont’d.

- Training, Training, Training
- Safety Meetings
- Safety Inspections & Improvements
- Defensive Driving
In the year January to December 2001 there was a large increase in the number of lost time and minor injuries due to chainsaw lacerations. Most were lacerations to the feet while trimming. Protective leg wear continues to do its job in preventing lacerations to the legs - there was only one lost time chainsaw cut to the legs. There were nine chainsaw cuts to the legs which were minor and many near misses reported where the chaps or pants were cut but no injury resulted. There were also many near miss events reported to the silviculture ARS, where protective chaps or pants prevented injury.
Research in New Zealand
Sabaton
Research in New Zealand

Rear Vision Camera

The versatile BellLogger commonly works in close proximity to skid workers and other machines. Mirrors have had limited success in providing rear vision for the operator because they get damaged or covered in mud in the demanding operational conditions. A closed circuit video system has been trialed as an effective means of providing operator rear vision and increasing the safety of workers in close proximity to the machine.
Research in Germany
Research at Auburn (USFS)

- Chain Shot
- Flung
- Tooth
Ergonomics

Figure 5 Experimental setup for measuring whole-body vibrations.

Figure 7 6-axis vibrations level on strip road.
CONCLUSION

- New Technology
- Better Products
- Acceptance by the Industry

**BUT IT’S WORTHLESS IF YOU DON’T USE IT!**
For More Info

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