Kiln Design and Improved Moisture Content Uniformity

Thom Smith
Old Town Lumber Company

- All Eastern White Pine
- Lumber from Different Sawmills
- Variation of Moisture Content %
Existing Kilns

- Wet Spots
- Over-drying
- Poor Air Flow
- Lack of Sensors
- Large Temperature Drop
- Lack of Control

What do we want in a kiln?
Air Movement in Kiln

- Air Speed
Air Movement in Kiln

• Air Speed

• Baffling
Air Movement in Kiln

• Air Speed

• Baffling

• Good Piling
Heating Requirements

• Use New Technology
Heating Requirements

- Use New Technology
- Multi-Zoning
Heating Requirements

- Use New Technology
- Multi-Zoning
- Distribution of Heat
Humidity Control

• Multiple Wet Bulbs
Humidity Control

- Multiple Wet Bulbs
- Good Venting
Humidity Control

- Multiple Wet Bulbs
- Good Venting
- Good Spray System

Putting it Together

- The Box
Putting it Together

• The Box

• Control System
Putting it Together

• The Box

• Control System

• Innovation
The End