Through an act of the Louisiana State Legislature, the LSU AgCenter established the Louisiana Forest Products Laboratory in 1992 (renamed the Louisiana Forest Products Development Center in 2003) to:

1. Provide technical assistance & information
2. Promote primary & value-added wood processing industries
3. Aid the state’s economy and well-being of its people through forest sector development

**LFPDC Faculty Members**

- Todd Shupe
- Niels de Hoop
- Mark Gibson
- Charles Clément
- Qinglin Wu
- Richard Vlosky
- George Grozdits

**LFPDC Administrative Coordinator**

- Linda Jeansonne

**Who Are Our Clients?**

- Primary & secondary wood products manufacturers
- Large & small companies
- Rural & urban companies
- Hobbyists & professionals
- Homeowners & consumers
- Policymakers & decision makers

**Key Areas-Research & Extension**

- Manufacturing Efficiency
- Treated Wood
- Wood Quality
- Value-Added Products
- Business & Economic Development
- Nanotechnology
- Certification
- Composites
- Biomass/Biofuels
- Safety
- Wood Durability
- Nanotechnology
The Year in Review-2007

- 70 popular articles
- 29 peer-reviewed articles
- $1,445,207 in outside grants and contracts
- 20 presentations in Louisiana
- 29 presentations in other states
- 30 presentations in other countries

Breaking News!

Wood Utilization Research Center Grant
Louisiana Wood Durability Center
Source of Support: CSREES
Award Amount: $61,707 for Year 1
Allen Rutherford (PI), co-PIs: Shupe, Wu, de Hoop
LFPDC Wood Durability Laboratory is International Accreditation Service (IAS) Certified!

The LFPDC at the LSU AgCenter

The LFPDC at the LSU AgCenter

Richard Vlosky

Grants & Contracts-2007

- Spatial Mapping and Analysis of Louisiana Primary Forest Products Manufacturers. Louisiana Department of Agriculture & Forestry. $12,000. With Dr. Shupe
- Spatial Mapping and Analysis of Louisiana Secondary Forest Products Manufacturers. $6,000. Louisiana Economic Development. With Dr. Shupe.

Research Areas

- Louisiana Forest Sector Supply Chain Mapping
- Non-Industrial Private Landowners & Certification
- Cypress Mulch-Home Centers & Landscapers/Nurseries- (with Dr. Clement & Dr. Dunn
- Statistical Overview of the US Wood Preserving Industry: 2007
- Certification and the Furniture Industry (with Purdue University)
Major Outreach Initiatives

- AgMagic – World of Wonder (9,000+ visitors)
- LFPDC Newsletter (2,200 recipients 2x/year)
- Collateral Materials (fact-sheets, brochures, etc.)
- LFPDC Website
- Louisiana Forest Products Community Website
- Louisiana Forest Industries Website
- United Nations – ECE/FAO Current Marketing Issues Website

LFPDC Website: www.rnr.lsu.edu/lfpdc

Louisiana Forest Industries Website
www.lsuagcenter.com/forest_industries

Welcome to Louisiana’s Forest Products Industries Website

Welcome to the Louisiana Forest Products Community web site! This site is a showcase of Louisiana’s forest products industry, including news, events, and directories. It is designed to provide valuable information to the public and industry professionals alike.

Visits:
- 93% - North America
- 3% - Europe
- 3% - Asia
- 1% - Oceania

26,000 visits in 2007
3,000 downloads/week
Major Outreach Initiatives

- United Nations: Economic Commission for Europe/Food and Agriculture Organization (UNECE/FAO)

Forest Products Marketing Team “Current Issues Website”

- www.rnr.lsu.edu/lfpdc/unece; 5,300 visits since launch in 2004

2008-2009 Goals

- Certification research
- Re-visit Louisiana forest sector training needs
- Host a visiting Fulbright Scholar from India
- Expand collaboration with Dr. Clément in value-added marketing/business development
- Co-edit a book on current issues in forest products marketing
- Expand web-based information/content delivery

OSHA Strategic Partnership

- L.a. Logging Council - LFA
- Logging companies
- OSHA
- L.a. Dept. of Labor, Workplace Safety
- LSU AgCenter
- Accident Data since 2000
Biomass Energy Booklet

Louisiana Biomass Resources Database
- Document Biomass Supplies in Louisiana
- Sponsor: La. Dept. of Natural Resources
- $93,290 for 1 Year
- Co-Principal Investigators:
  - Cornelis de Hoop
  - Gary Breitenbeck (Agronomy)
  - S. Joseph Chang (School of RNR)
  - Rodney Hendrick (LCES-Calligari Center)
  - Fred Piazza (AgCenter-Info. Technology)
  - Chandra Theegala (Bio & Ag Engineering)

Research Areas
- Closed Loop Recycling of Treated Wood
- Metal-Free Wood Preservatives
- Leach-Resistant Borate Preservatives
- Biotransformation of Organic Wood Preservatives
- Wood Durability Testing (with Dr. Wu)

Todd Shupe
Grants & Contracts-2007

- Formosan Subterranean Termite Wood Durability Research. LSU AgCenter Special Grant. $21,350. With Dr. Wu
- Educating Wildland-Urban Interface Property Owners in the Florida Parishes about Wildfire Fuels Management. Louisiana Department of Agriculture and Forestry. $126,000. With Dr. de Hoop.
- Louisiana Natural Resources Symposium. $26,100. USDA FS, USDA FWS, private industry.

Grants & Contracts-2007

- Enhancement of advanced materials processing facilities at the Louisiana Forest Products Development Center. Louisiana Board of Regents. $14,000. With Dr. Lee.
- Miscellaneous projects-$44,684

2008-2009 Goals

- Scale up treated wood recycling efforts
- Assist Calhoun faculty
- Efficacy of recycled CCA
- Field testing of composite poles
- Expand IAS certified lab testing – LUMCON, Coastal Research Station, etc.

On-Going Research Areas

- Wood/Natural Fiber Plastic Composites
  - US market $3.1 Billion by 2008
  - Developing industry in Louisiana
- Nano Copper Compound as New Wood Preservatives
  - Multi-billion dollar market for treated wood
  - Need for new preservative systems
- Wood-based composites
  - Composite durability
  - Processing improvement

Research Funding

- Thermoplastics Composites Reinforced with Natural Fibers and Inorganic Nano-Particles
  - LA BOR ITRS ($150,000 with industry match)
  - LA BOR Enhancement ($170,000)
  - DOE/USDA Biomass ($791,568)
- Nano Copper Carbon Compound as New Generation Wood Preservatives: Industrial Application Development
  - LA BOR-ITRS ($110,000 with industry match)
- Industry funding
2008-2009 Goals

- Development of Pilot-Scale Extrusion Line for Manufacturing Wood/Natural Fiber Plastic Composites at LSU AGC
  - Equipment being installed/Fully functional by end of May
  - Process optimization
- Development of Facilities for Manufacturing Nano Cellulose Crystals and for Using in Composite and Other Materials
  - High-pressure (up to 30,000 PSI) milling/dispersing equipment on order/Fully functional by September
  - Process optimization

Objectives

- Add value to Louisiana forest products
  - Assist existing companies:
    - Improve processing
    - Improve quality of workplace
  - Education
    - Raise awareness of forestry/forest products as an industry
    - Outreach through PLT/4H/Vo-Tech schools/community colleges.

Activities-2007

- Presentations/Newsletters/Articles introduced new extension services for value-added wood products.
- Industry assistance: lumber drying; cypress mulch marketing; furniture marketing; developing new business in equipment manufacture.

2008-2009 Goals

- Organize value-added wood products focus groups to develop wood products community integrating landowners, portable sawmills, lumber drying facility, and secondary manufacturers (vertical integration).
- Develop quality of workplace documents/workshops/conference to help reduce employee turnover.

2008-2009 Goals

- Educational Outreach:
  - Participation in PLT Teacher’s Tour.
  - Participation in 4H Summer Camp programs.
  - Present Extension programming materials at Forest Products Society International Conference.
The LFPDC at Louisiana Tech

Grants/Contracts 2007-08
- Louisiana Forest Products Development Center Contract. Funded annually by LSU AgCenter, $55,000.

2007-2008 Proposals
- To Nine Sigma: Nano-Coating of Cellulose Fibers to Reduce Loss-of-Strength in High Humidity Environments, requested $100,000, In cooperation with Institute of Micromanufacturing and Nano Pulp and Paper, LLC.

Major Research Thrusts 2007-2008
- Manufacturing Improved and New Products through Nanotechnology (70%)
- Wood and Fiber Quality (15%)
- Adhesion and Surface Treatment (10%)
- Implementation of Simple a Technology to Successfully Monitor the Progress of Air-drying Lumber (5%)

2007-2008 Proposals
To Nine Sigma: Polyelectrolyte Multilayers Shells of Variable Surface Charge, requester $98,160, in cooperation with Institute for Micromanufacturing and Nano Pulp and Paper, LLC.

To DOE-SBIR: Layer by Layer Nano Coating of Cellulosic Fibers for Better Paper Production. Submitted by Steve Sauzier Associates in Cooperation with Louisiana Tech University and Madison Forest Products Laboratory, $250,000.
Participated in the Oklahoma Red Cedar Associations Annual Meeting – from pencil to thin-veneer

Developed unique-simple pulp fiber (length and characterization) software.

Continue implementation of unique simple lumber-air-drying monitoring system.


Research (~70%)
> Wood Growth Analyses
> Cooperate with Institute for Micromanufacturing
> Adapt the 21st century technologies (sustainable-green, bioscience, and nanotechnologies) into current woody raw material processing.

Extension/Outreach (~20%)
> ArkLaTex new recycled paper industry

Business/Economic Development (~10%)
> Small hardwood mills

Louisiana Tech/LFPDC Outreach

The Louisiana Tech Nano Pulp and Paper Initiative:

Advertisement from Louisiana Economic Development

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1. Expansion of outreach / Extension programs.
2. Examine funding opportunities for research that meets Louisiana stakeholder needs.
3. Increase laboratory testing and new product development capabilities.

The state of Louisiana: Naturally Resourceful.

JELD-WEN, the world’s largest manufacturer of windows and doors, is building a plant in Winnfield that is expected to generate $86.6 million in private investment. Louisiana offers “Fast Track” environmental permitting to quickly get you up and running. The Weyerhaeuser Company recently converted its entire plywood operation in Dodson to veneer manufacturing to help meet growing residential product needs. With over 14 million acres of timber, forestry is Louisiana’s largest agricultural enterprise, contributing nearly $4.6 billion to the state’s economy in 2006. Louisiana Tech University is applying a new nanotechnology method of layer-by-layer nanoassembly for coating pulp and paper, a technique indicative of the state’s cutting-edge development. Louisiana maintains a multimodal logistics and transportation infrastructure. The Roy O. Martin Company recently opened North America’s largest Oriented Strand Board facility and also took advantage of the state’s $8 million bond allocation to finance air pollution control Equipment. Approximately $10 billion in cash incentives are available through Gulf Opportunity Zone and Renewal Community programs. To learn more or to find out about valuable Gulf Opportunity Zone Incentives, call Kelsey Short at 225-342-2089 or visit us at LouisianaForward.com/Wood © 2008 Louisiana Economic Development

Where Are We Going?

1. Expansion of outreach / Extension programs.
2. Examine funding opportunities for research that meets Louisiana stakeholder needs.
3. Increase laboratory testing and new product development capabilities.

Goals for 2008-2009

Research (~70%)
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Discussion and Next Steps