

Forest Storm Disasters: Hurricanes, Tornadoes and Ice

Salvage Response by Forestry Associations & Industry

“Lessons learned from Hugo in 1989-90”

**Mac Lupold, Lupold Consulting, Inc, Camden, SC
Also Exec Sec, Hugo Salvage Council
Planning Session, Myrtle Beach, SC, 4/15/2008**

**“Seeking Unprecedented
Solutions To Unprecedented
Challenges”**

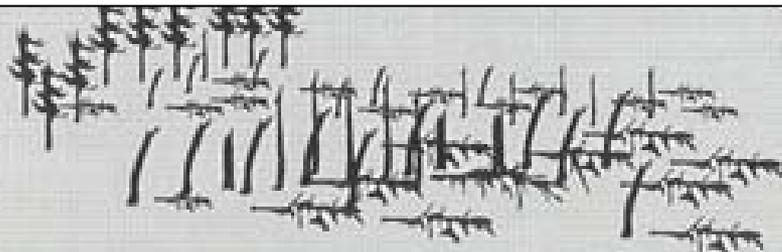
***Storm damage wood is
perishable, the clock is clicking***



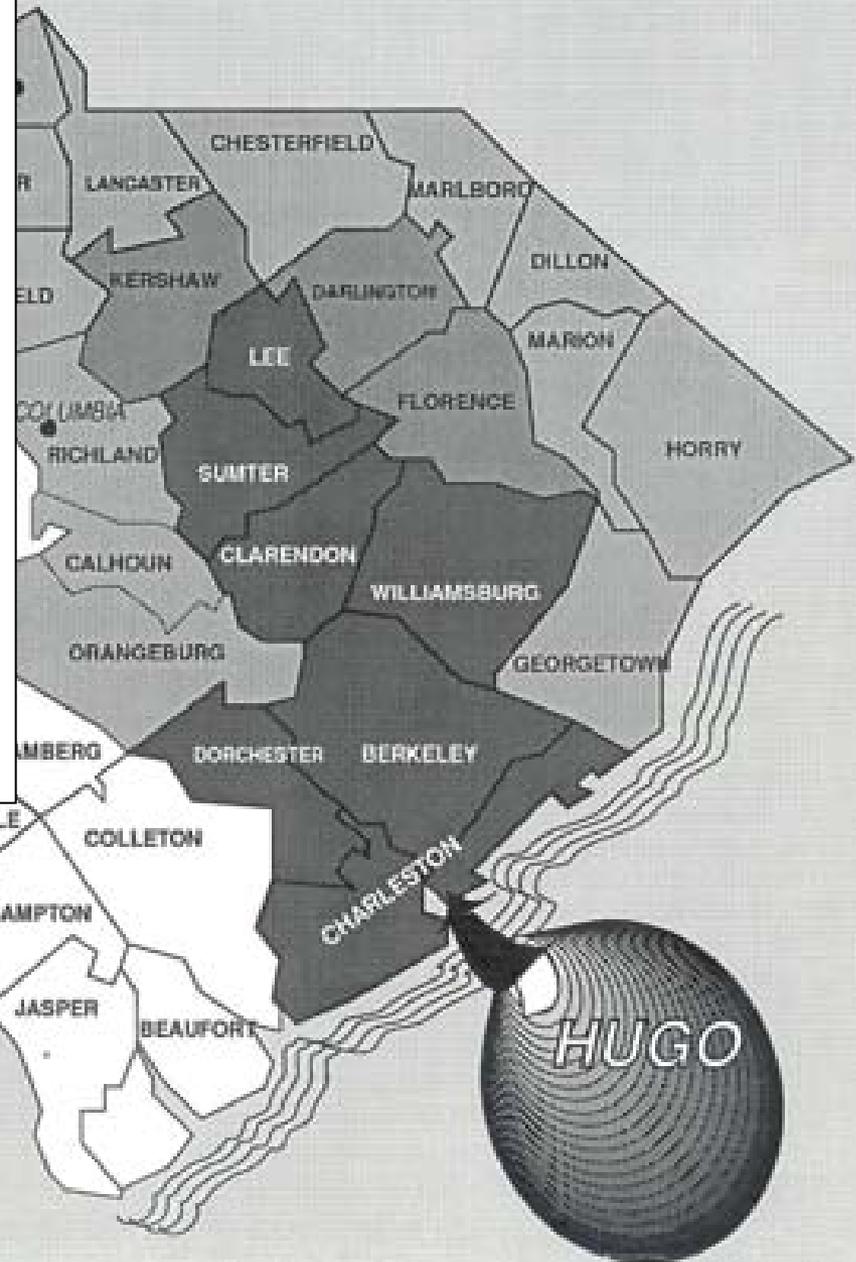
HUGO'S DAMAGE TO SOUTH CAROLINA'S FORESTS

Key Points:

- September 22, 1989, category 4
- Damage: 84 million tons, \$1.54 billion
- Highest volume/acre FIA Unit in South
- No rain, then 15" inches next 5 weeks
- Governor creates Salvage Council
- Four Working Committees created
- Salvage Goal set at 25% volume
- Logging capacity doubled
- 46 wet storage sites, 1+ million tons
- Pine salvage 25%, hardwood 5%
- Landowners recovered 10% loss value
- Loss, at 2006 values, \$3.4 billion
- Today, \$51 Billion Loss, SC Economy



- Counties with EXTENSIVE DAMAGE
- Counties with MODERATE DAMAGE
- Counties with LIGHT DAMAGE



Timely Damage Assessment

Recommendations:

- **FIA plot location modeling**
- **Verify severity zones on ground**
- **Salvage planning needs sound initial estimate, don't rush**
- **Coordinated damage assessment plan methodology in place**
- **Salvage structure based on degree of damages**

Private verses Public Salvage

- Private (88% SC)

- Cash losses, few tax deducts
- Landscape, public input not an issue
- Owners next to public, USFS land
- Tree farmers need guidance, flyers, web site on all aspects of salvage, tax consequences
- Forestry Assoc direct any major salvage effort

- Public (12% SC)

- USFS Nat Forest on coast major impact
- Public comment, Hugo delay 6-8 month
- USFS, preapproved harvest plans in place, blank contracts, preapproved vendors
- RCW's, etc
- Beneficial to expand longleaf habitat
- Other than State Forestry Com, not Assoc players

Databases By State, Web Site, Contact Info, Capabilities:

- **Wood Using Mills (including energy)**
- **Independent Wet Log Storage Operators**
- **Loggers (logger associations)**
- **Wood buyers/dealers**
- **Independent Truckers (residues, logs)**
- **Foresters to Contact: Consultants, Public, Industry**
- **Equipment Suppliers**
- **Forest Landowners**
- **Silvicultural services**
- **Debris removal services**
- **Export alternatives (if applicable)**
- **Salvage Coordination Center**

**Web Site Articles (in place, update,
plenty past examples):**

- Contact a Forester!**
- Summary Storm Damage, Locations, Volumes, Values**
- Harvest Treatments Based on Damage**
- What Can Mills Use**
- Salvage Scoreboard, Results Per Goal, Want Ads**
- Why Unit Values Are Less**
 - *Increased logging cost, lower productivity***
 - *Could be longer distance to haul***
 - *Portion unusable as sawlogs goes for pulpwood***
 - *Increased mill manufacturing cost, lower productivity, defects***

**Web Site Articles (in place, update,
plenty past examples) continued:**

- Why Salvage Timeframes Are Limited**
- Fire Protection Activities**
- Wet Storage Site Design and Operation**
- Wood, Not Wood & Dirt**
- What Is Bluestain**
- Tax Consequences**
- Value Forestry and Forest Products to State**
- Problems, Concerns As They Develop**
- Reforestation Alternatives**

HUGO, Pre-Internet:

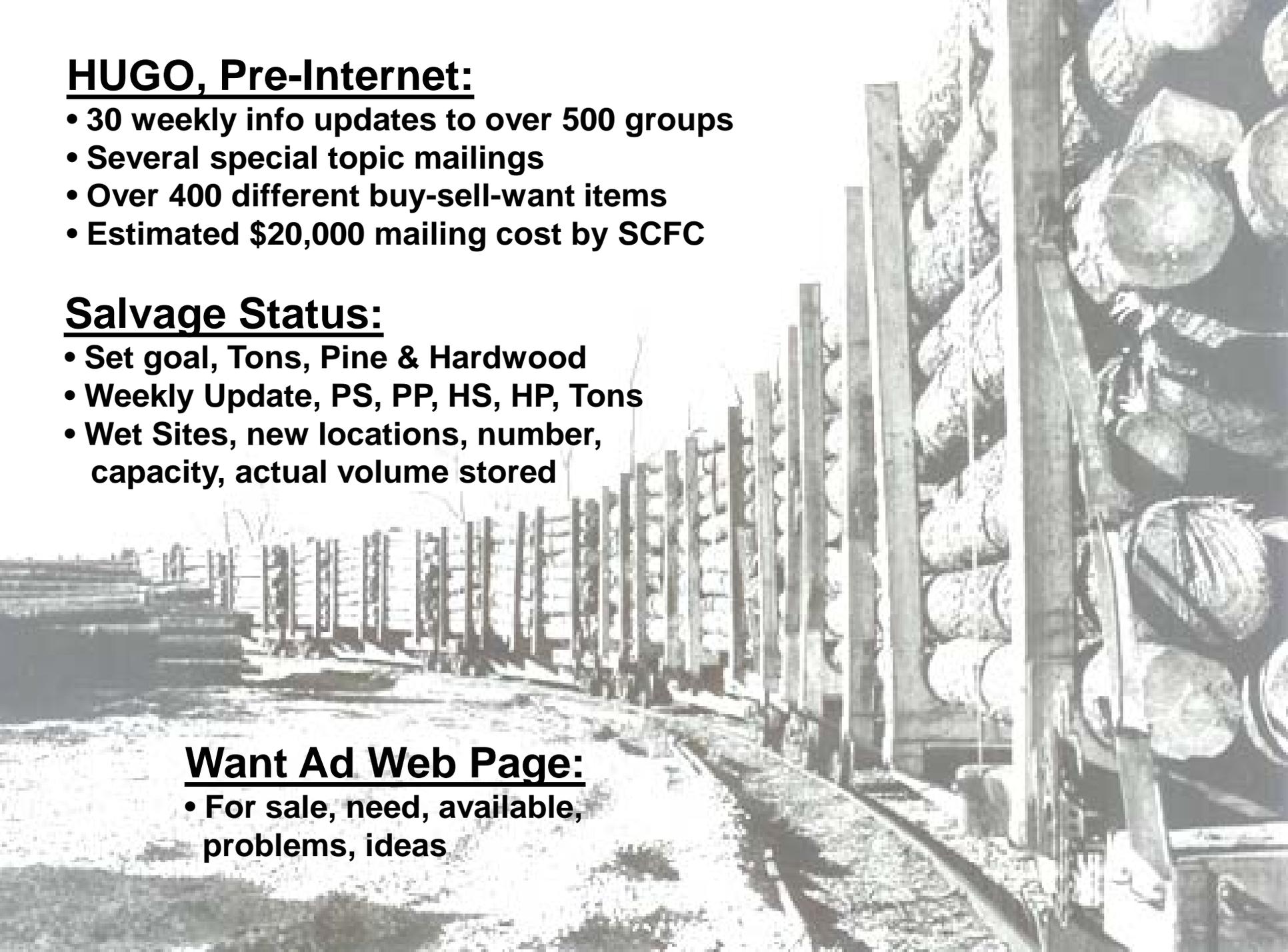
- 30 weekly info updates to over 500 groups
- Several special topic mailings
- Over 400 different buy-sell-want items
- Estimated \$20,000 mailing cost by SCFC

Salvage Status:

- Set goal, Tons, Pine & Hardwood
- Weekly Update, PS, PP, HS, HP, Tons
- Wet Sites, new locations, number, capacity, actual volume stored

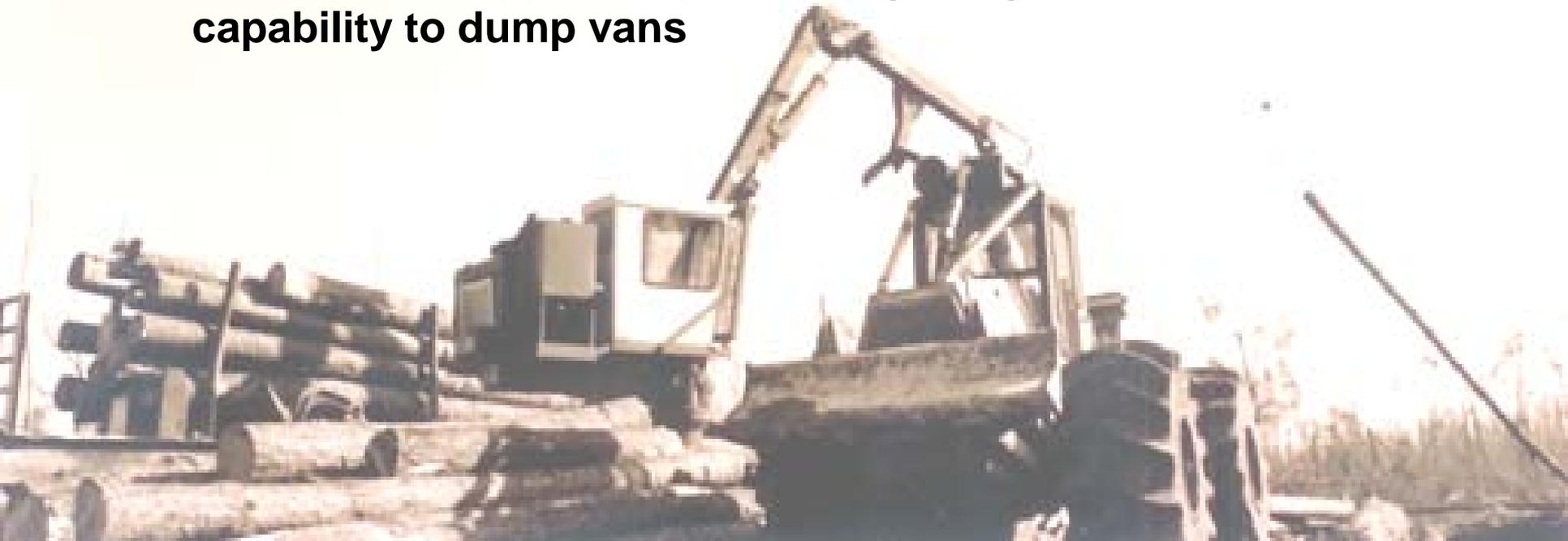
Want Ad Web Page:

- For sale, need, available, problems, ideas



Innovation

- **Industry companies/loggers will find the latest alternatives or adaptations**
- **Markets must cover as a minimum logging and hauling cost**
- **Energy options across South still scattered, hard to increase current users unless existing shortage**
- **Next time, chipping and energy consumption alternatives will require chippers in place, freight logic markets and capability to dump vans**



**Hugo: Not Enough Landowner Meetings
Ivan, Alabama: Advised To Have More**

**Should be able to have several canned
powerpoint talks about all aspects of salvage.**



**Modified to the
new event. Focus
on small private
landowner. Cover
topics previously
mentioned to be
included in web
page documents.**

**Salvage Publicity Will Dwindle
Down To the “Unusual” By
Week 4, Few Papers Want to
See More Salvage Results**





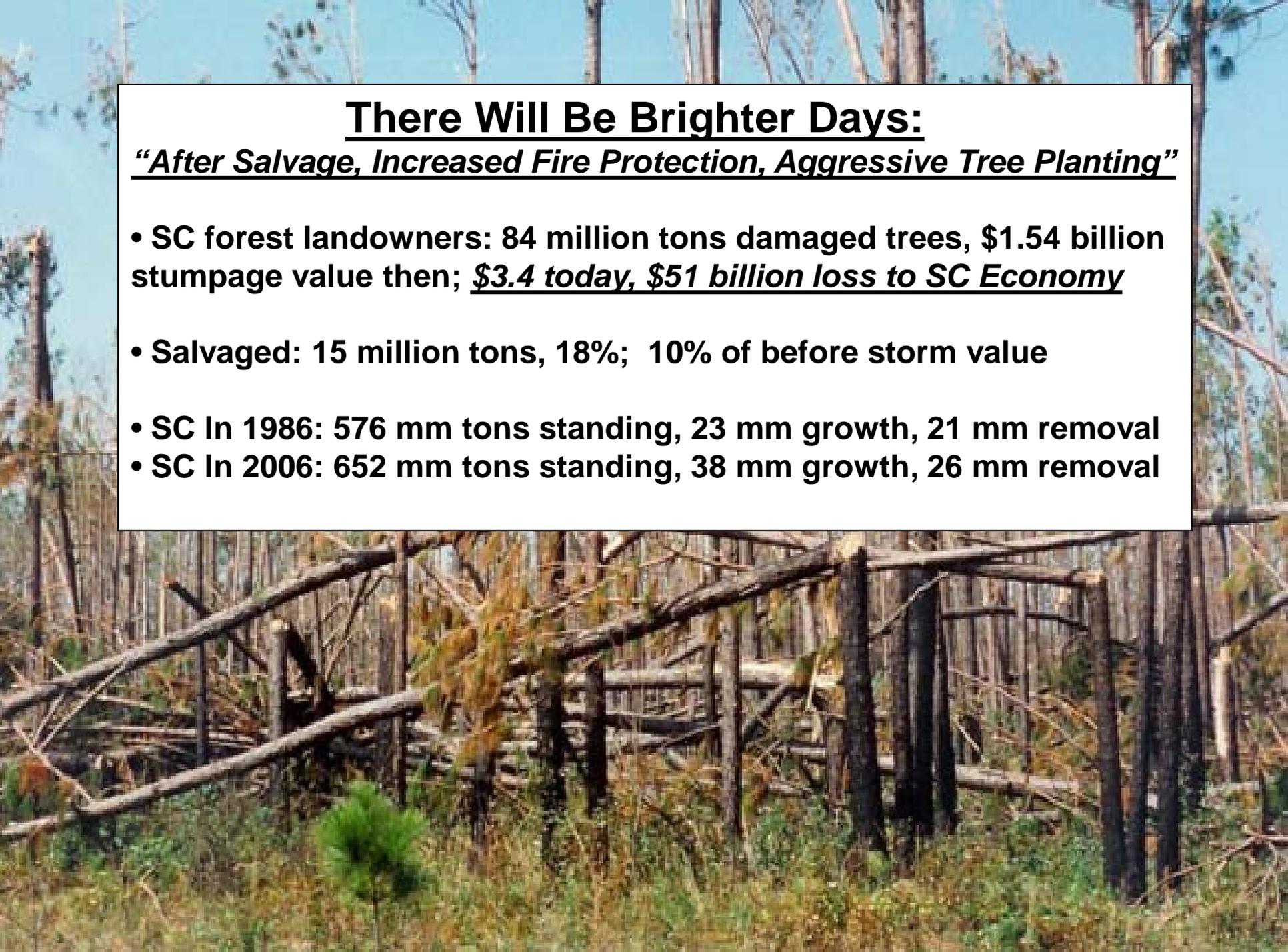
Wet Storage Plan on web site:

- Copy wet site plan criteria preapproved by state environmental
- Application to operate site per preapproved criteria
- FEMA preapproved plan to automatically provide contract roundwood wet storage sites for up to 20% of damaged volume, pay for timber, maintain storage for up to three years, operate site and liquidate per product cost incurred
- US Government in 1938 in New England had 63 leased log ponds with over 3 million tons logs
- Could apply to chips or grinder fuel

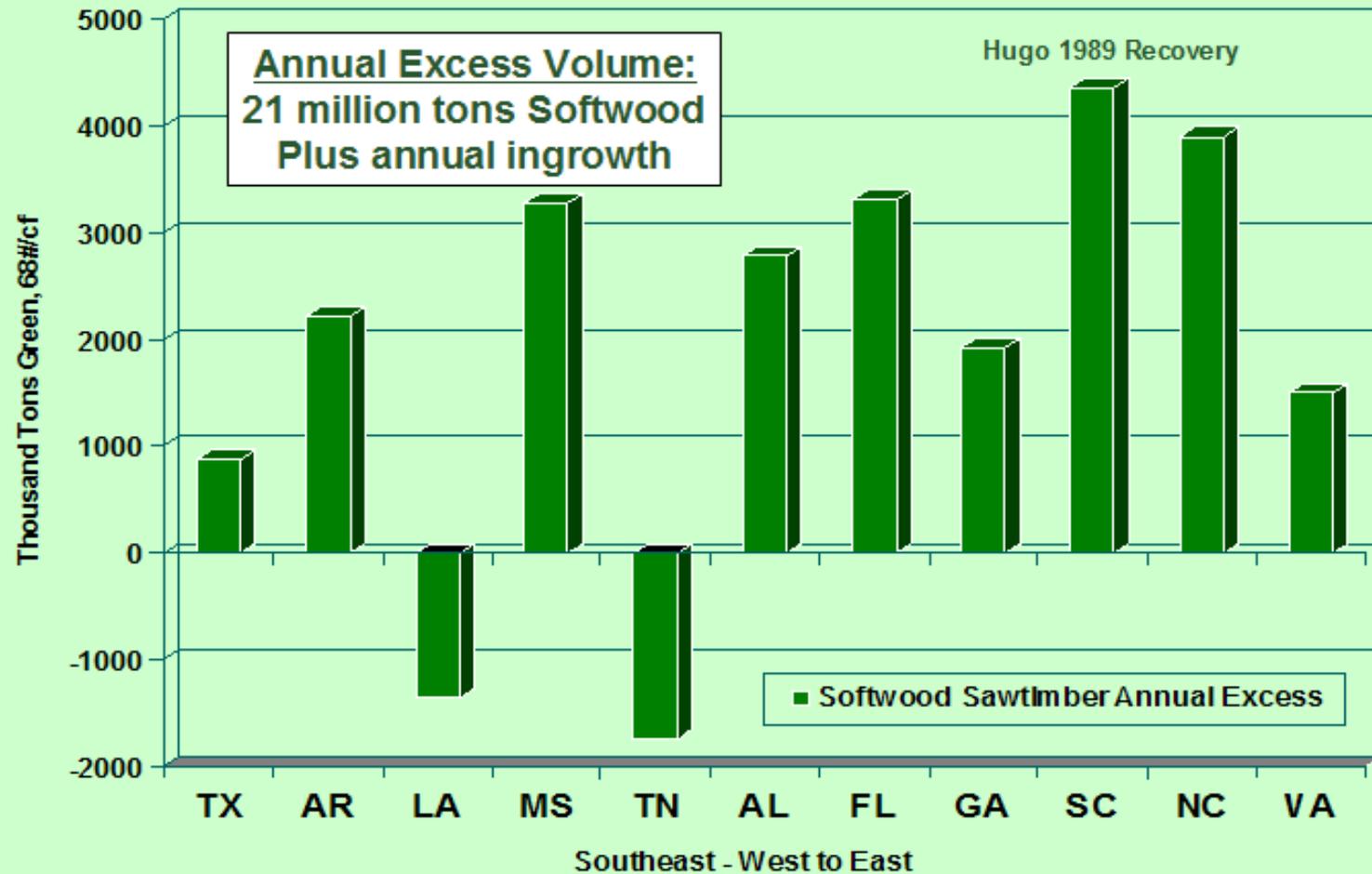
There Will Be Brighter Days:

“After Salvage, Increased Fire Protection, Aggressive Tree Planting”

- **SC forest landowners: 84 million tons damaged trees, \$1.54 billion stumpage value then; \$3.4 today, \$51 billion loss to SC Economy**
- **Salvaged: 15 million tons, 18%; 10% of before storm value**
- **SC In 1986: 576 mm tons standing, 23 mm growth, 21 mm removal**
- **SC In 2006: 652 mm tons standing, 38 mm growth, 26 mm removal**



Excess Annual Pine Sawtimber, All Ownerships





John Muir in 1874 stated
he observed 6 foot
diameter trees in the
Sierra Nevada's swaying
as if they were like grass

Sketch by John Muir