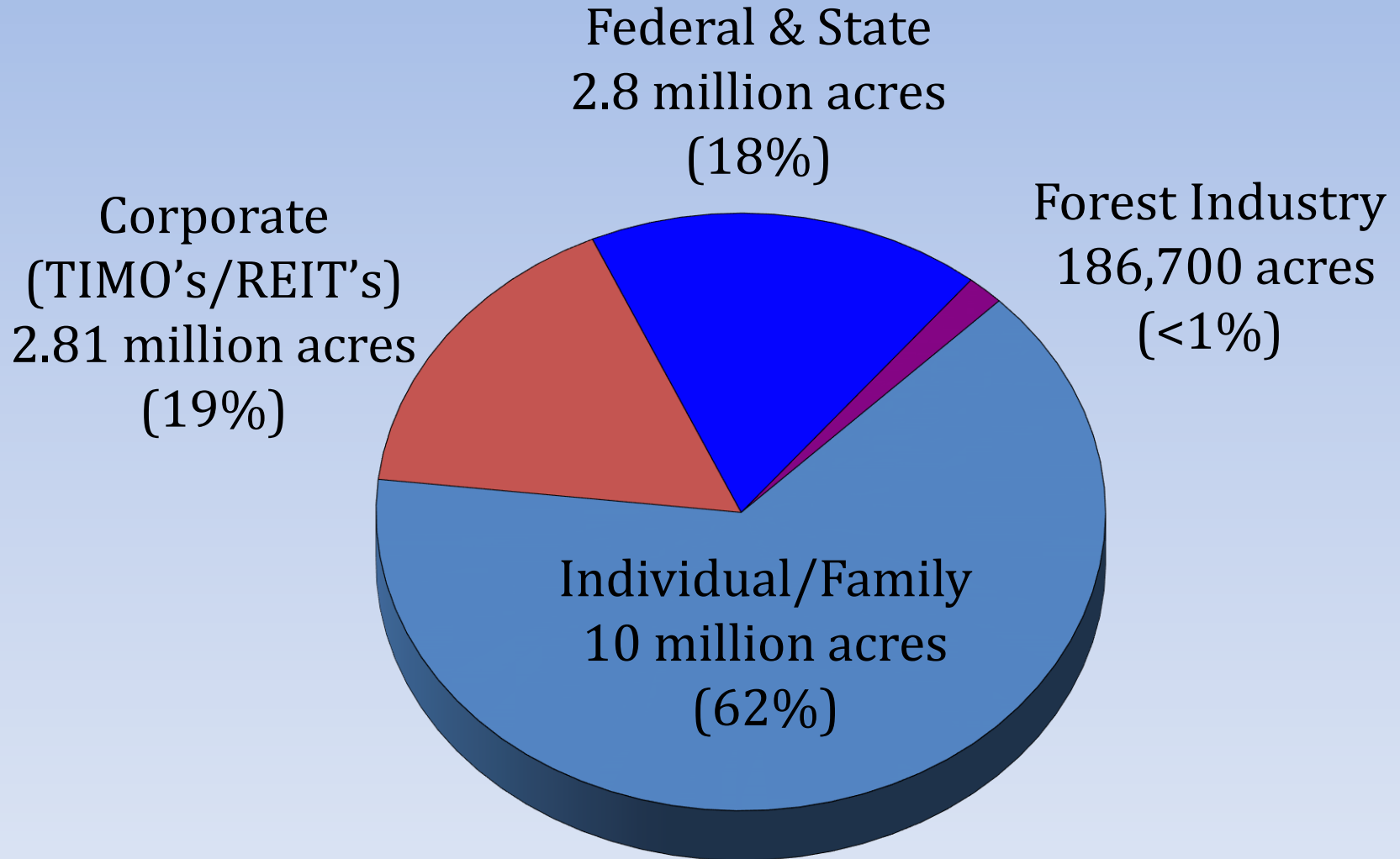


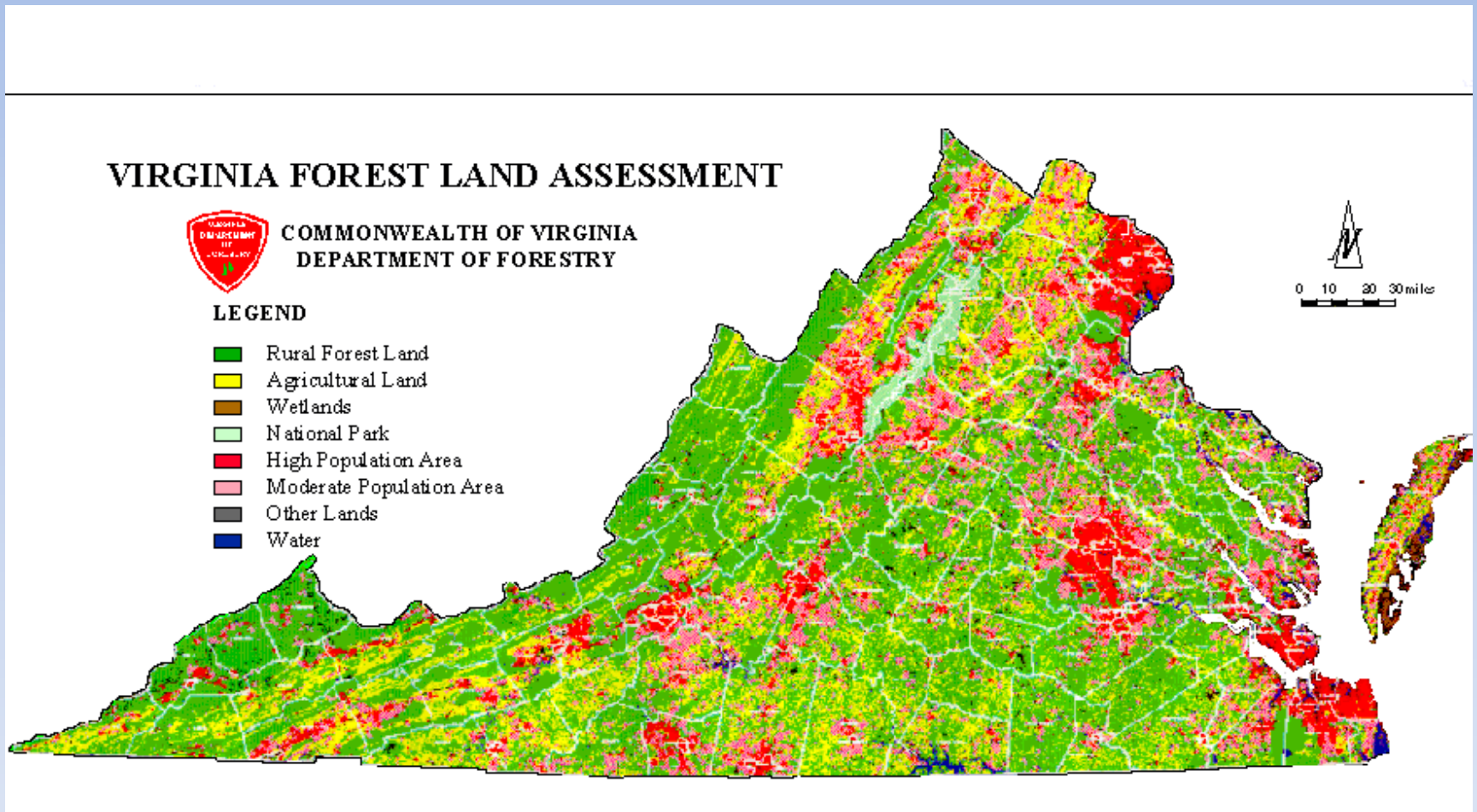
Challenges to Sustainable Forestry: Fragmentation



Forest Land Ownership in Virginia

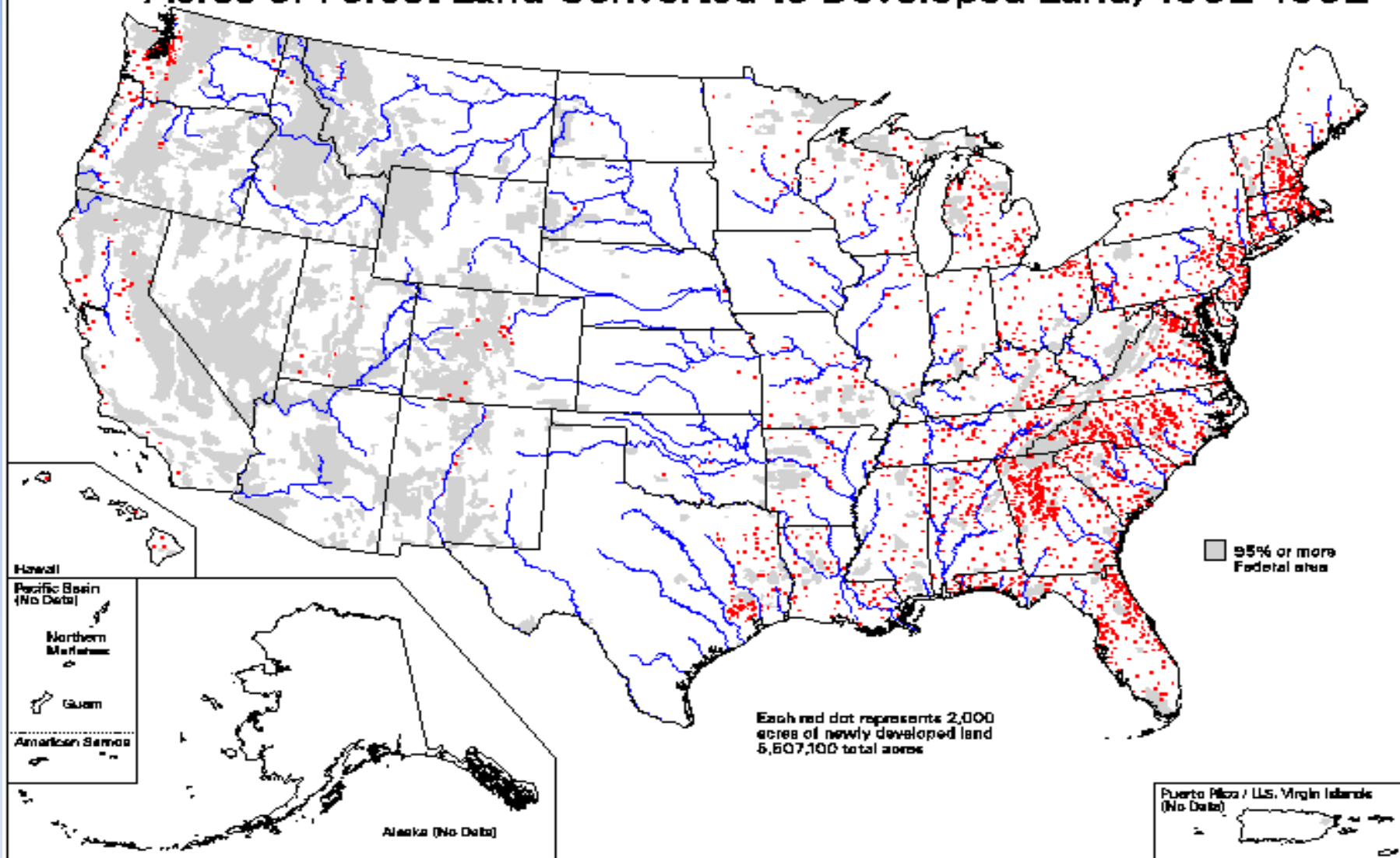


- In 2010, 27,000 acres of forestland were converted to other uses

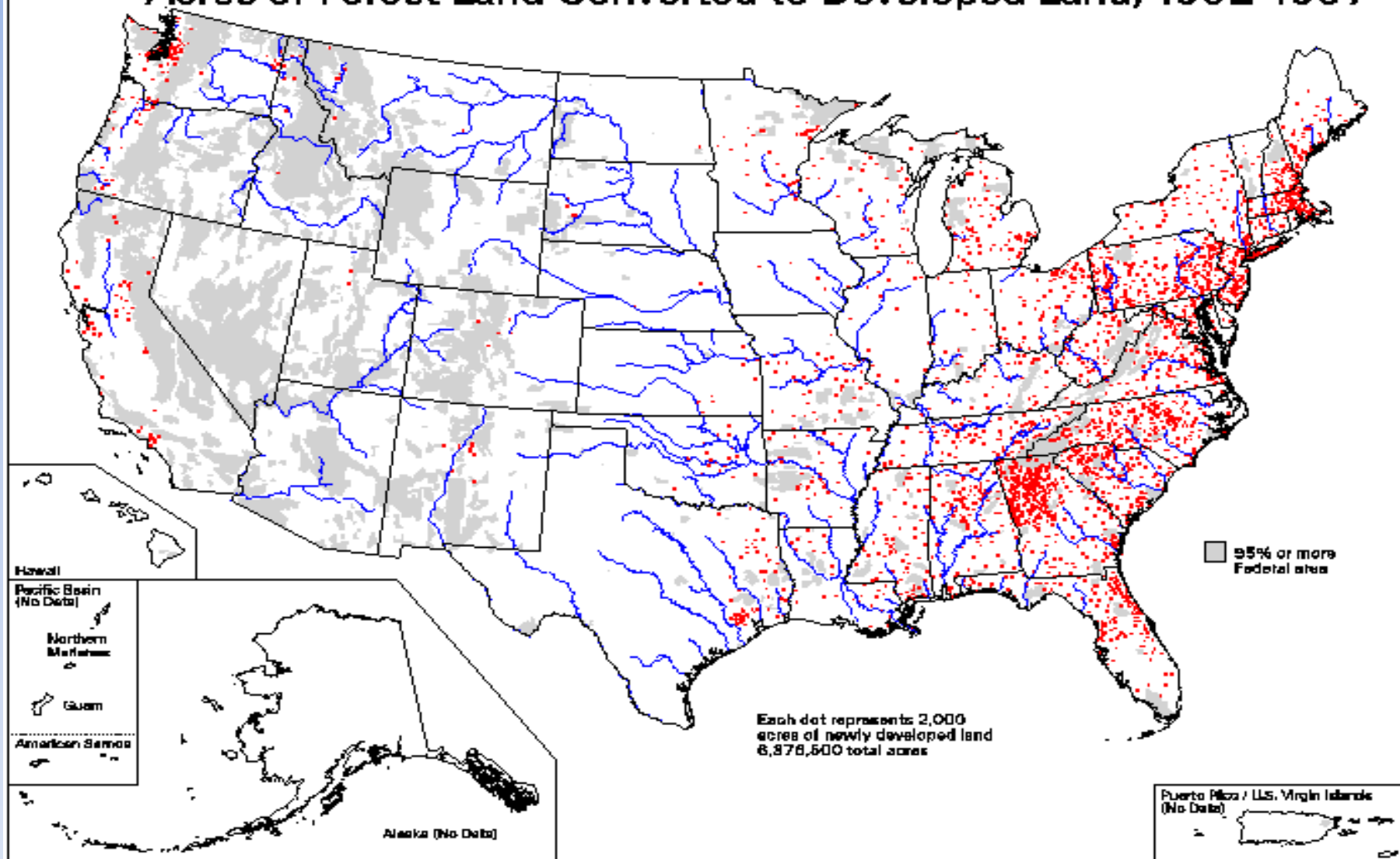


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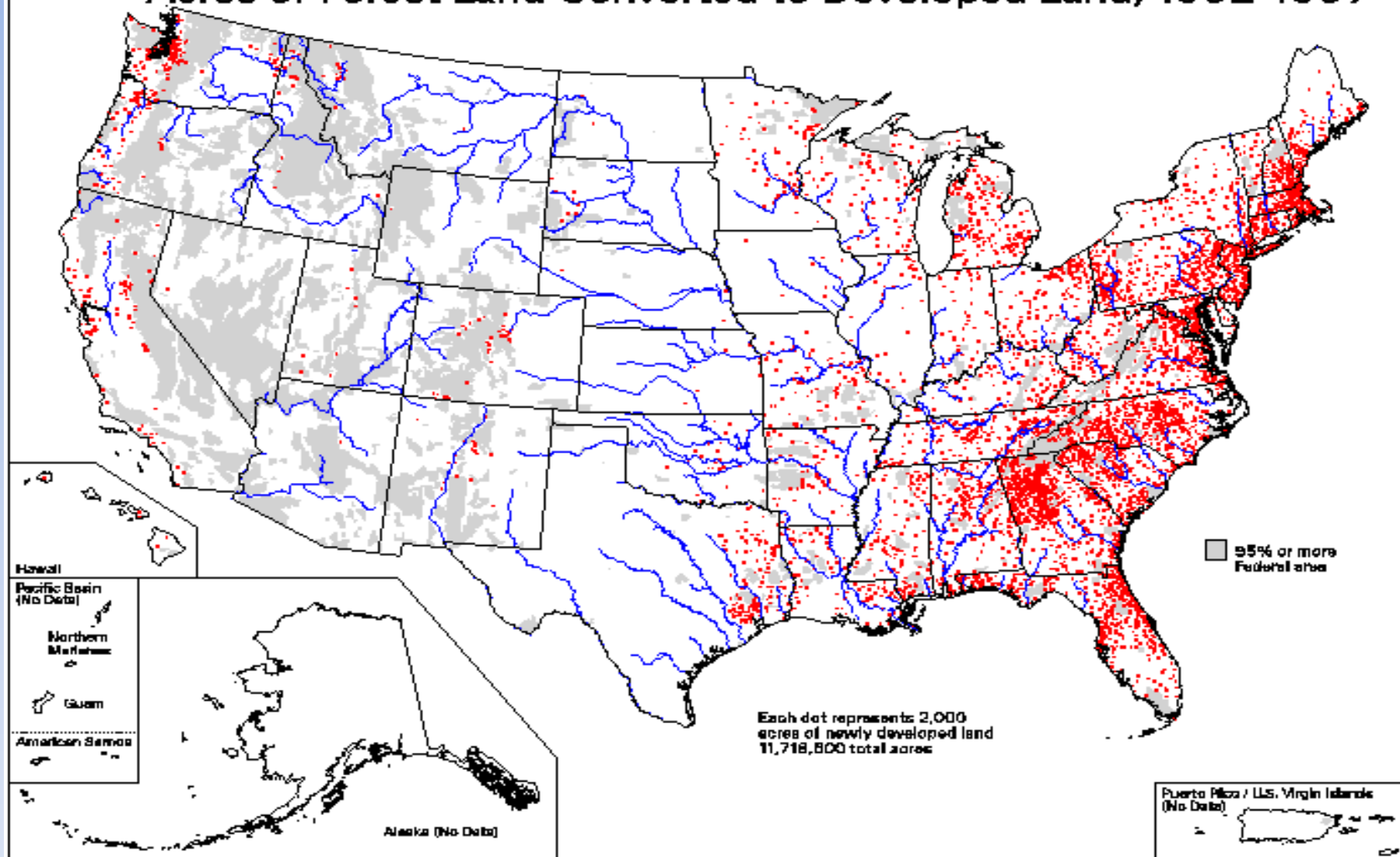
Acres of Forest Land Converted to Developed Land, 1982-1992

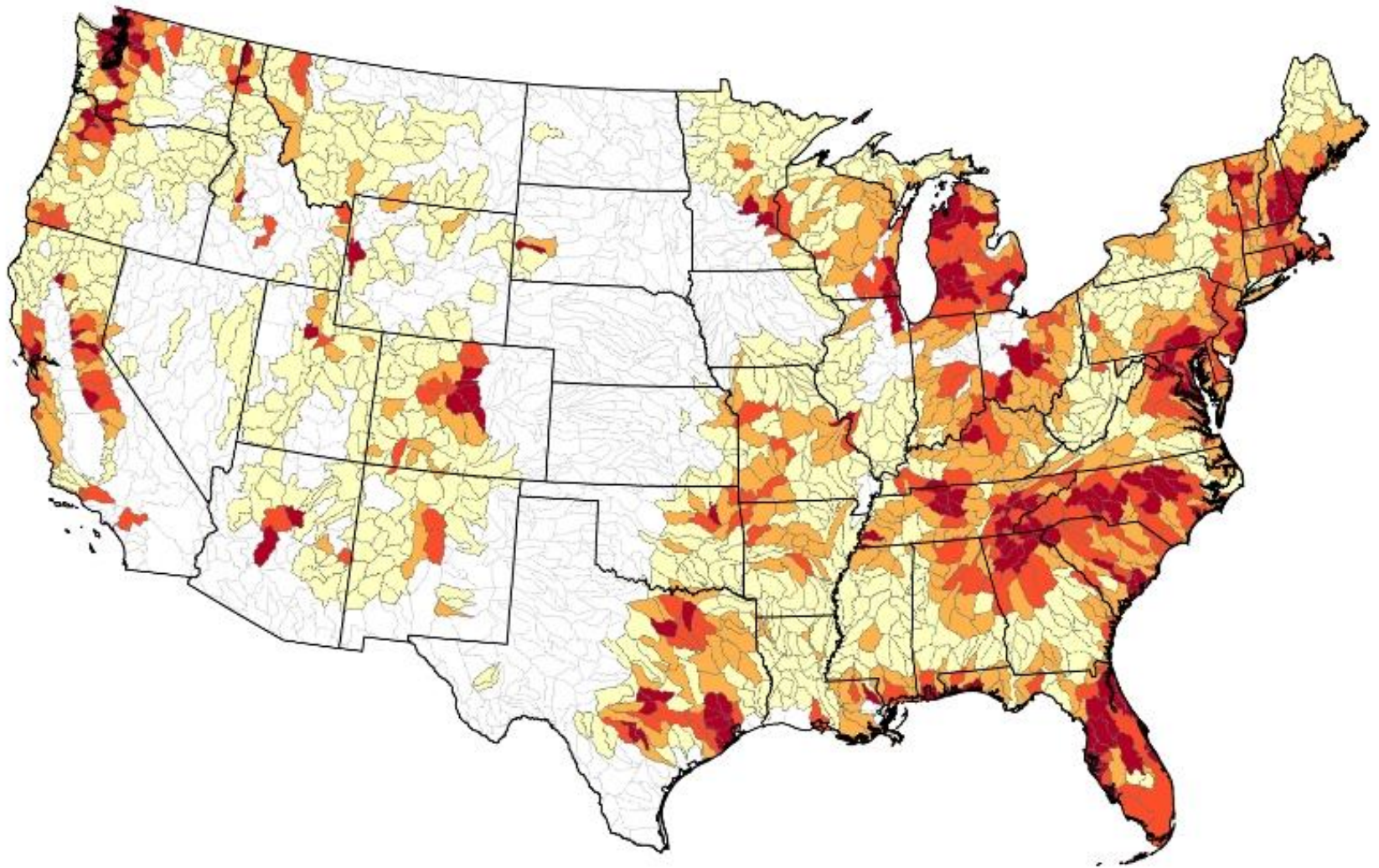


Acres of Forest Land Converted to Developed Land, 1992-1997



Acres of Forest Land Converted to Developed Land, 1982-1997





Percentage of Private Forest to Experience Increased Housing Density

- 90th percentile (36.51 to 72.35% private forest to be developed)
- 75th percentile (23.47 to 36.50% private forest to be developed)
- 50th percentile (10.86 to 23.46% private forest to be developed)
- Less than 50th percentile (0.00 to 10.85% private forest to be developed)
- Insufficient private forest for this analysis

Trends

- Forest landbase ↓
- Number of private landowners ↑
- Ownership tract acreage ↓
- Tenure of ownership ↓
- Development pressure ↑
- New/different owners



Large-lot Zoning

- Requires a minimum lot size for homes – generally at least 10 areas
- Intent is to maintain open/rural atmosphere



Large-lot Zoning

- Loudoun County – 2/3 limited to 1 house per 10 or 20 acres
- Fauquier County – 3/4 of land outside standard subdivision densities
- Two times as much land is being consumed by residential development in ‘rural’ and other preservation areas as in designated growth areas



Large-lot Zoning

- Promotes sprawl
- Example: A 700 home development has been proposed for Montgomery County Maryland
 - Normal subdivision zoning allows 30 homes every 6 acres, or 0.2 acres/home)
 - $700 \text{ homes} \times 0.2 \text{ acres/home} = 140 \text{ acres impacted}$
 - However, Montgomery County has a large lot ordinance requiring 25 acres per home
 - $700 \text{ homes} \times 25 \text{ acres/home} = 17,500 \text{ acres impacted!}$

Definitions

- Parcelization:

The division of large, contiguous forest tracts into smaller properties; promotes forest fragmentation and land-use conversion.

- Fragmentation:

The conversion of forests to non-forest uses; leads to diverse land uses on former forest land. Tends to isolate and separate forested tracts from each other.

Graphic from: USDA Forest Service



Negative Effects

- Timber
- Wildlife



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Negative Effects

- Increases disturbance by humans and domesticated animals
- Encourages exotic and invasive species
- Lack of cohesive management policy may make some goals unattainable



Opportunities

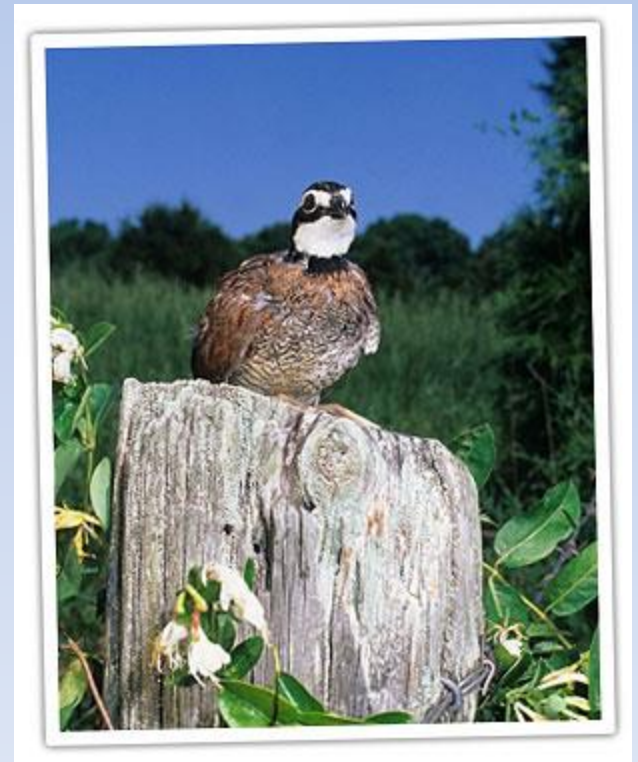
- Landowners working together to meet shared goals
- USDA Forest Service's Cooperating Across Boundaries



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Benefits

- Manage for species which have large habitat requirements
- Create wildlife corridors
- Provide different habitat elements



Opportunities

- Increasing & enhancing natural areas on small lots



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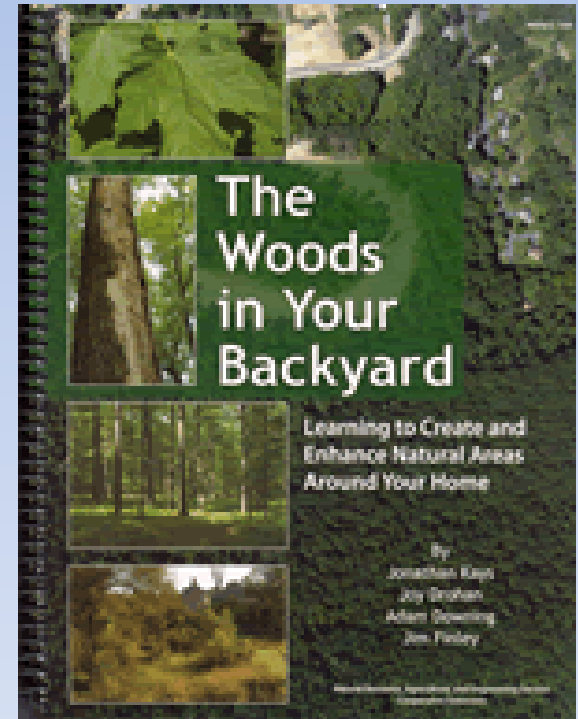
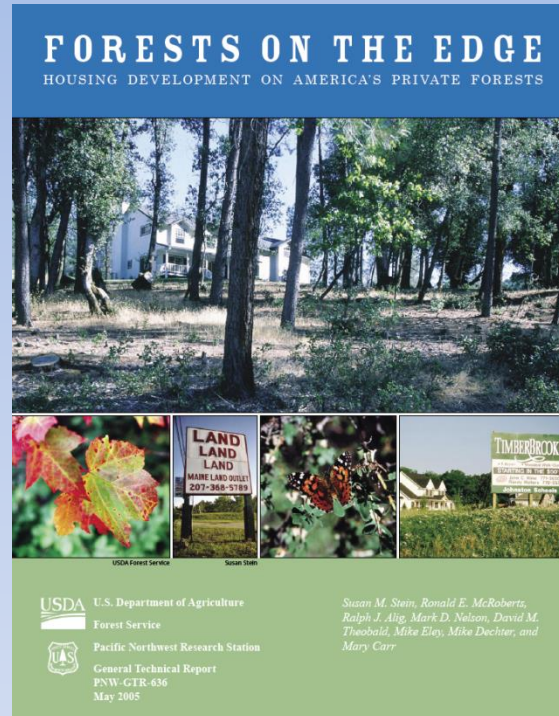
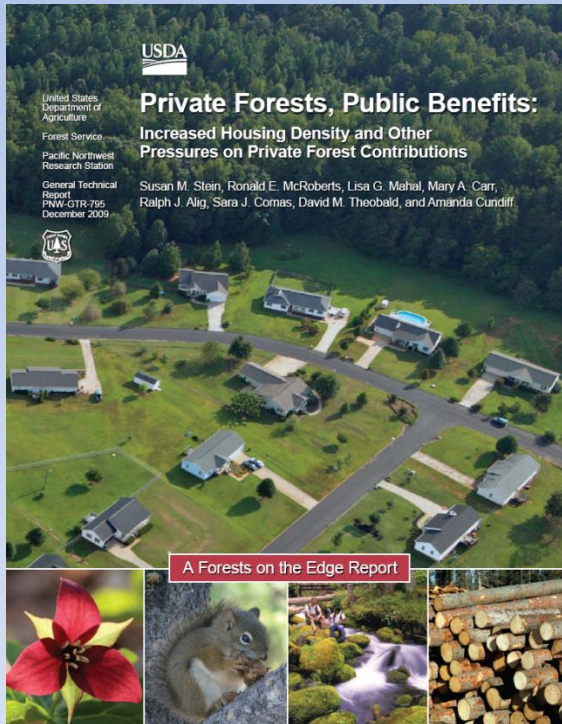
Opportunities - Natural Resource Professionals



- Change how we think about management
- Target new audiences
- New programs
- New services
- New service providers



Resources



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