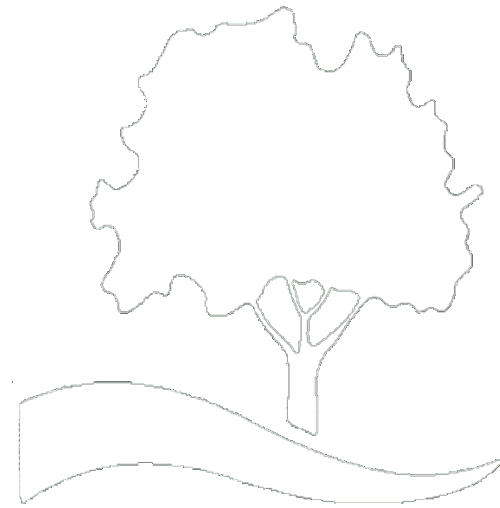


DELAWARE
NATURE
SOCIETY



Educating Today, Preserving for Tomorrow

-
- ◆ **Change in Delaware's Natural Landscape since the 1970s with Respect to Invasive Plant Species**
 - ◆ **Frame of reference: original Natural Areas Inventory**
 - ◆ **By Lorraine M. Fleming**

-
- ◆ **New Castle County report 1975**
 - ◆ **Kent and Sussex Counties report 1976**
 - ◆ **Book: *Delaware's Outstanding Natural Areas and Their Preservation* 1978**

Then and Now

◆ **Species by Species**

◆ **Broad Ecological Categories**

◆ **Piedmont forest**

◆ **Affected Coastal Plain forests**

◆ Multiflora Rose



With biological control

Rose rosette disease



◆ Japanese Honeysuckle





Norway Maple

(no image)

◆ Oriental Bittersweet





Release cutting



◆ Bush Honeysuckles



◆ Wineberry



◆ Privets



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◆ **Winged Euonymus/
Burning Bush**





◆ Japanese Barberry



◆ Autumn Olive



◆ Garlic Mustard



Coastal marshes:

◆ Phragmites/ Common Reed











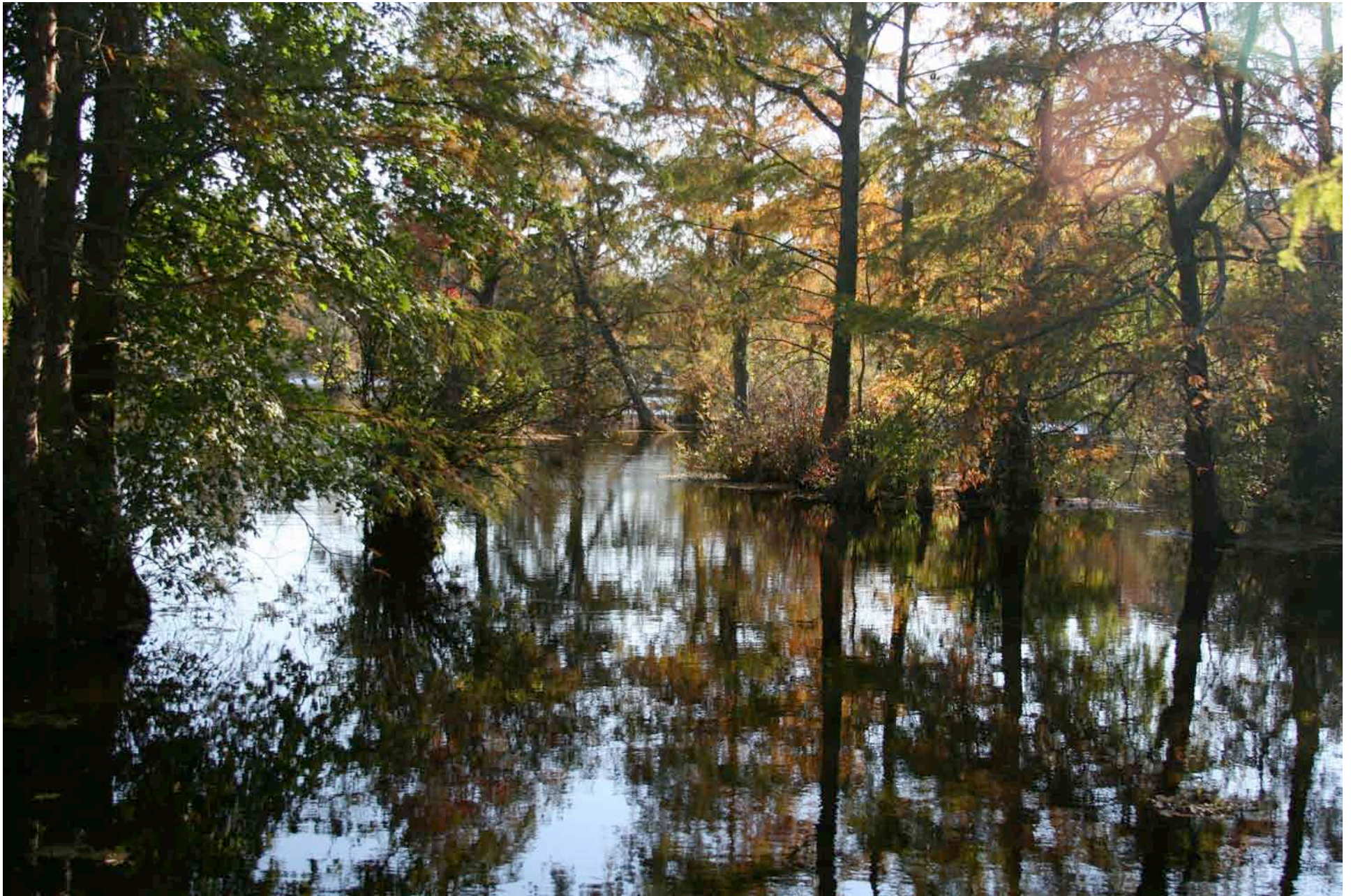






◆ **Inland Wetlands/Tidal Fresh Natural
Areas**





Perimeter invasion by **English Ivy**

At Trussum Pond





◆ Dunelands



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Spotted Knapweed



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◆ **What did we not see?**

◆ Japanese Stilt Grass



◆ Purple Loosestrife



Biological control

Galeracella calmariensis



◆ Porcelain Berry





◆ Mile-a-Minute



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Biological control

Asian weevil



◆ Lesser Celandine



◆ Japanese Hops



◆ **Hydrilla**
◆ **(no image)**

◆ Natural landscape improvement?

Floodplain restoration

Red Clay Ravine

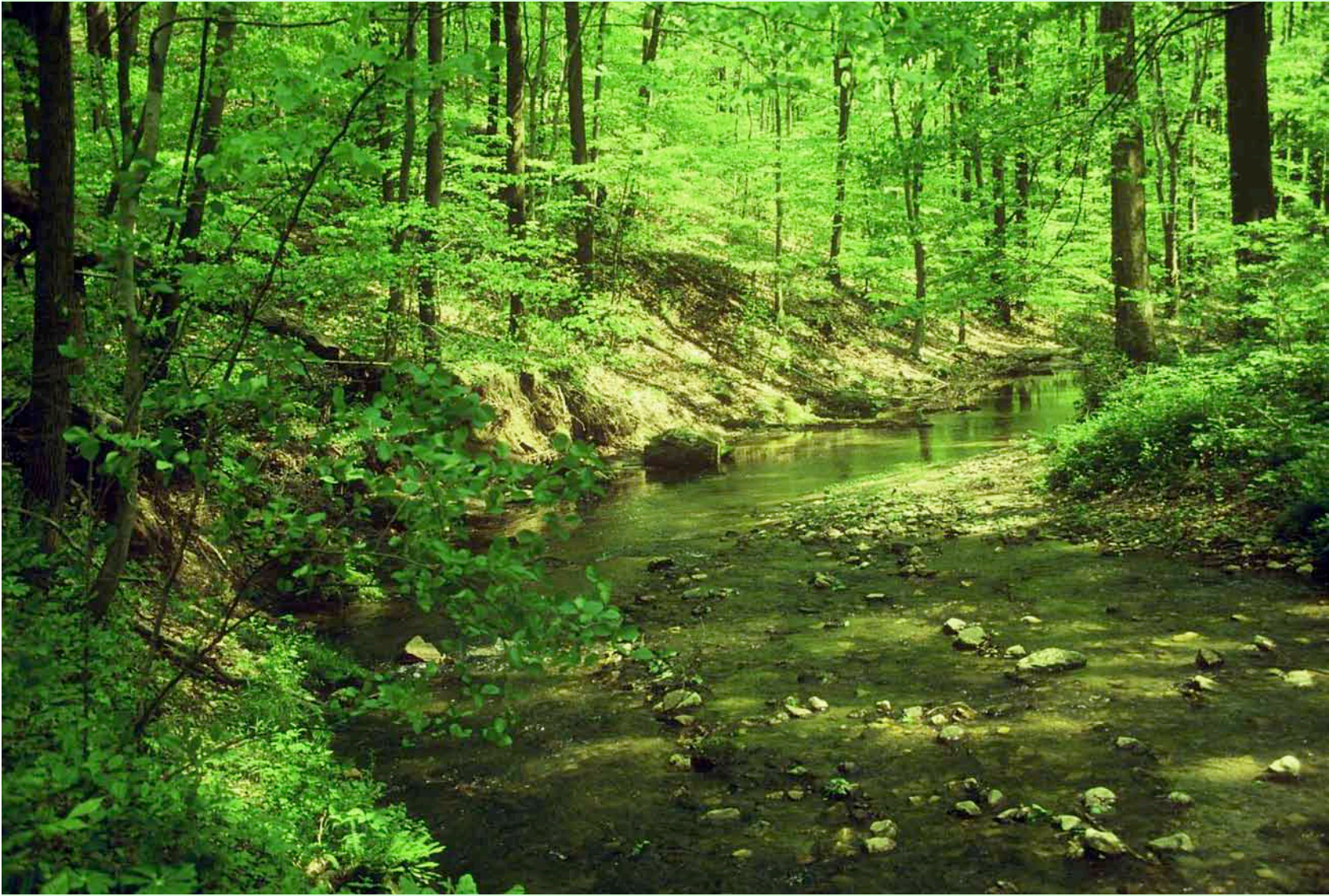


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Reforestation

Middle Run Natural Area New Castle County Park



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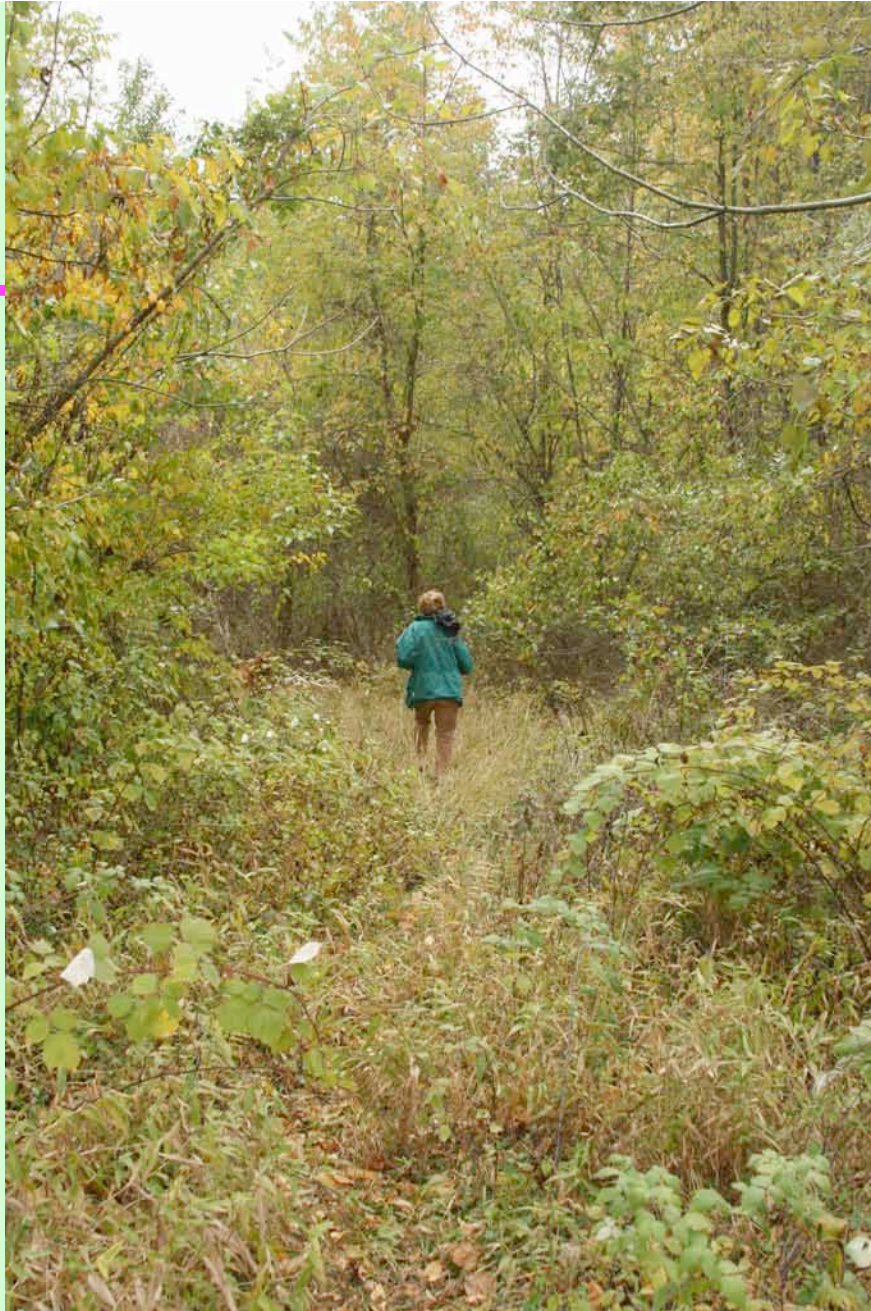
Volunteers plant twice a year



First planting--1991



And 17 years later---
--but invasive problems
persist



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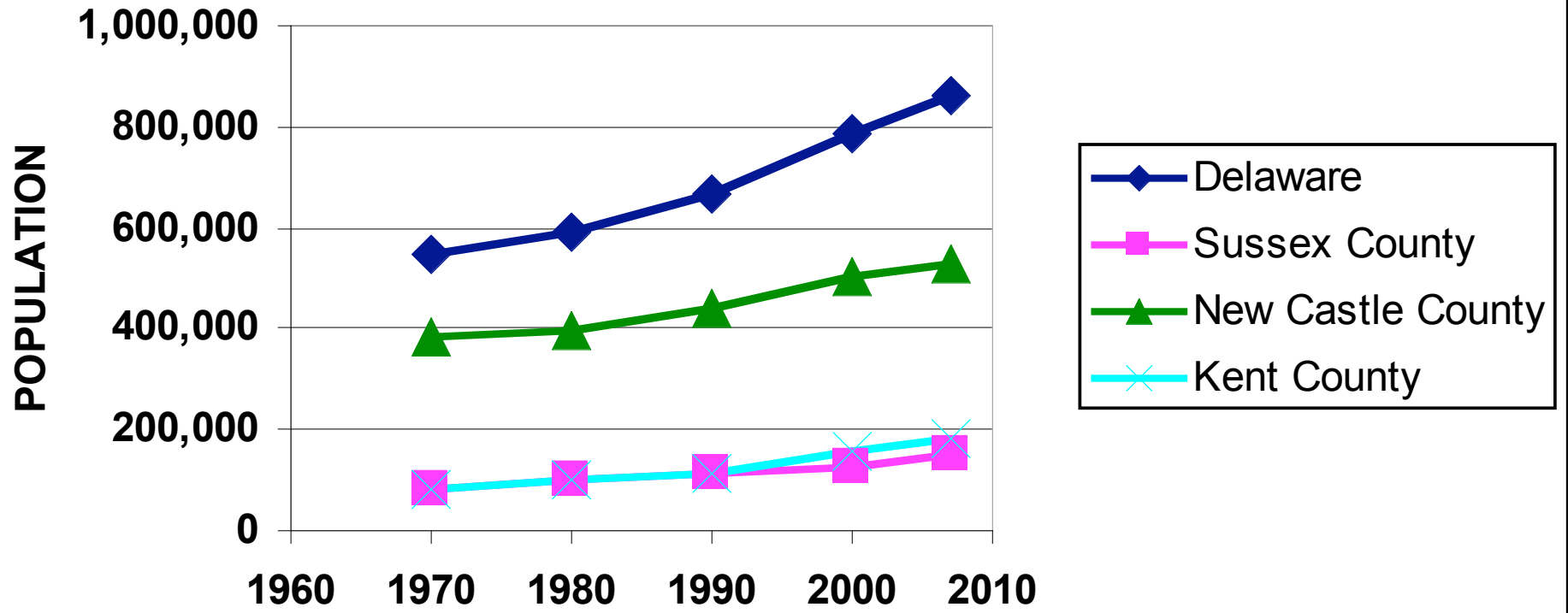
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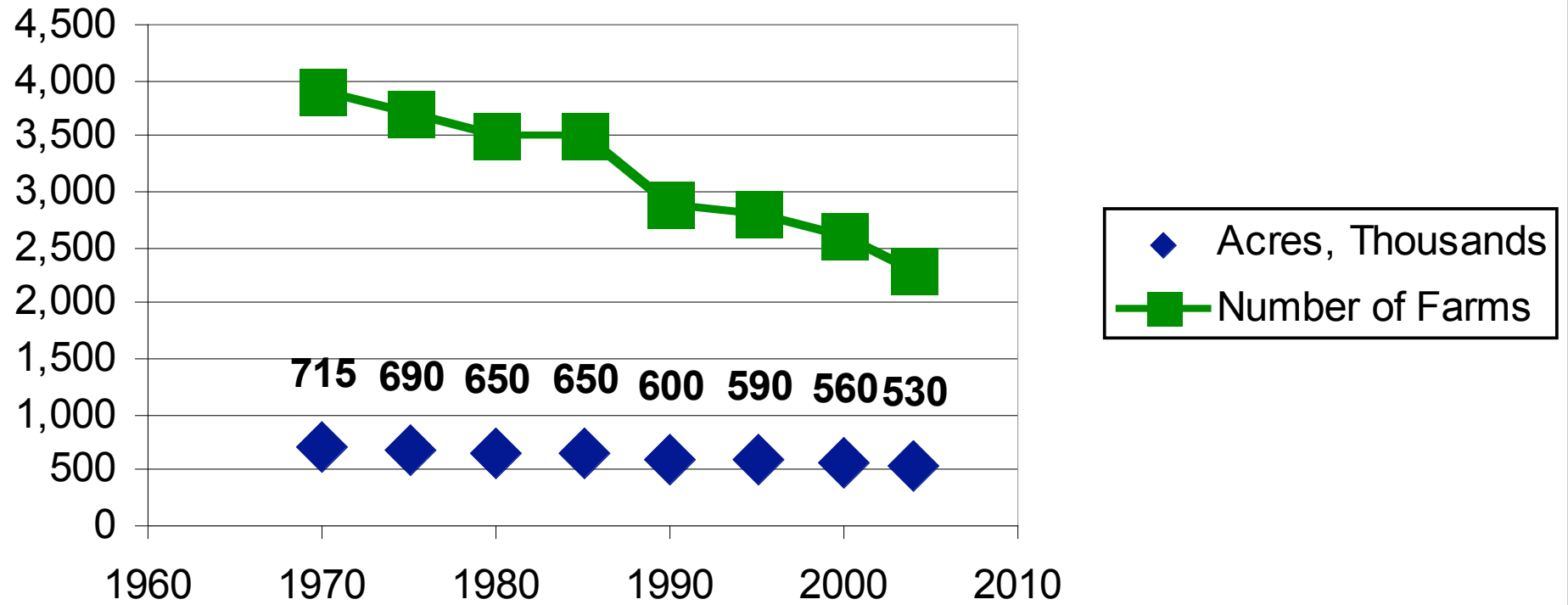


◆ Land use planning?

DELAWARE POPULATION CHANGE: 1970 - 2007



DECLINE IN FARMS AND FARMLAND ACREAGE



◆ **What further needs to be done?**

- **Nurseries**
- **Landowner incentives**
- **Education**
- **Climate change mitigation**
- **Removal/control--jobs**

◆ Photo Credits

- Jim White
- Dave Pro
- Derek Stoner/Sue Welles
- Dick Fleming
- And some consultation with Janet Ebert and Bill Haldeman

◆ **Thank you!**