



United States Department of Agriculture
Natural Resources Conservation Service

Dowling Branch 319 Project

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Geneva, Alabama

Water Quality In Geneva County

- Rich in natural resources, forests, and wildlife
- Rich in farm land
- 500 miles dirt roads; 400 miles paved roads
- 368,819 acres of land area
- Two rivers (Pea and Choctawhatchee)
- Average farm size - 199 acres
- 35% of land is cropland
- Total farm receipts - \$152,157,000

(Figures from Ala Ag Statistics – 2011)



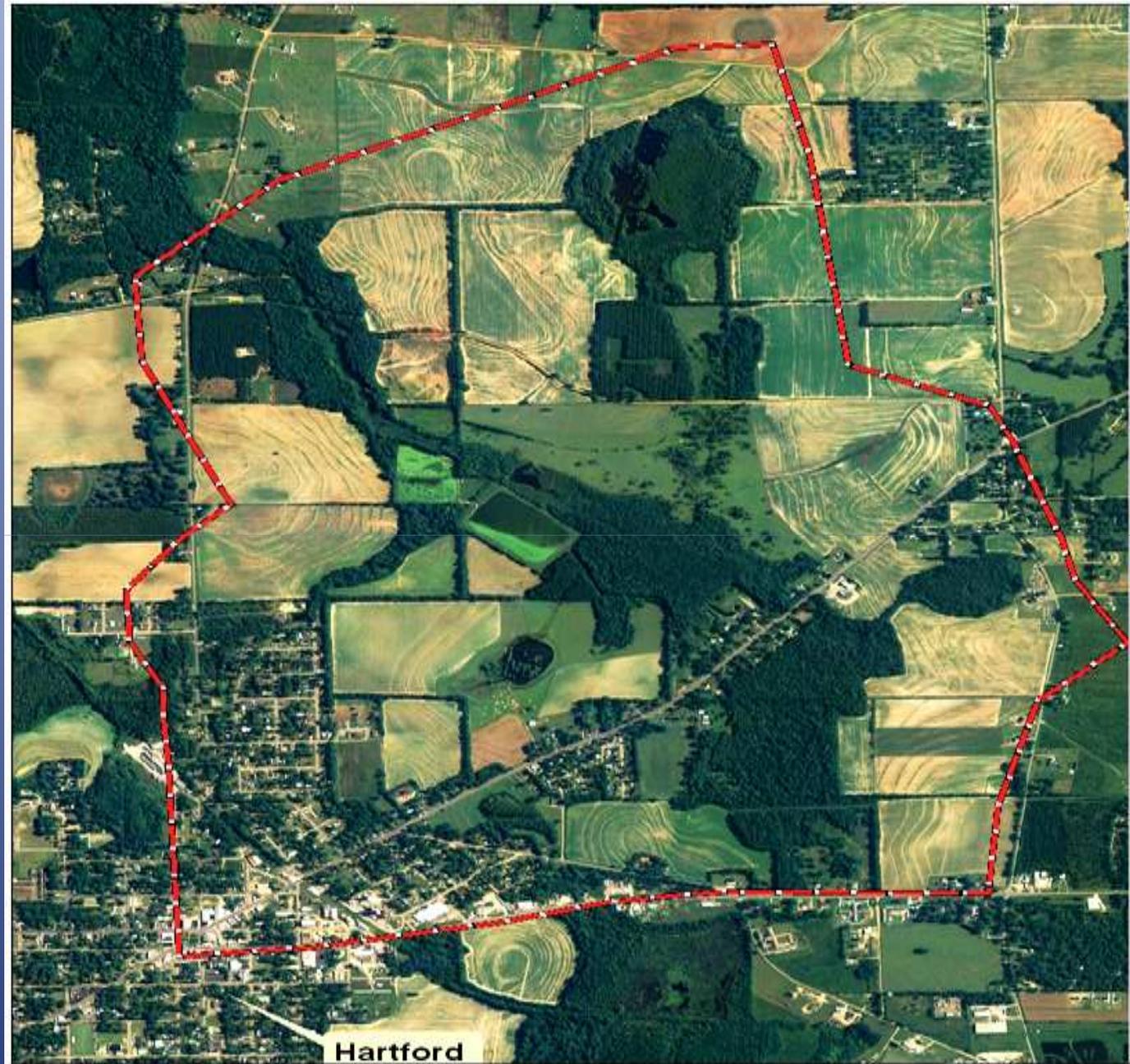
303 (d) List – Hurricane Creek Watershed 319 Watershed Restoration Project

- **Dowling Branch on Hurricane Creek - the only stream in Geneva County listed on the 303d List of Impaired Streams**
- **From June 2007-June 2010 - the Geneva County SWCD entered into contract as the Sponsor to provide funding for voluntary, incentive-based mechanisms for landowners and/or land users to reduce non-point source pollutant loadings into Dowling Branch**
- **A no-till drill was purchased**
- **Financial investment - \$318,000**

303 (d) List – Hurricane Creek Watershed 319 Watershed Restoration Project

- **Improved water quality in Geneva County by installing grazing, erosion control, and water quality practices affecting 15,647 acres of land in the watershed**
- **Partners included:**
 - **NRCS - Geneva, AL**
 - **Geneva County Soil and Water Conservation District (SWCD)**
 - **Alabama Department of Environmental Management (ADEM)**
 - **U.S. Fish & Wildlife Service**
 - **Nine property owners**
 - **Other agencies**

Aerial View of Dowling Branch Watershed



Planning the Project

- ADEM and the Geneva County SWCD developed a Cooperative Agreement to complete work on Dowling Branch
- ADEM, SWCD, and partners met on-site to evaluate the BMP's needed to complete the project
- Plans were developed for each individual BMP before any work could be done



The Planning Process



Completed Practices

Grazing

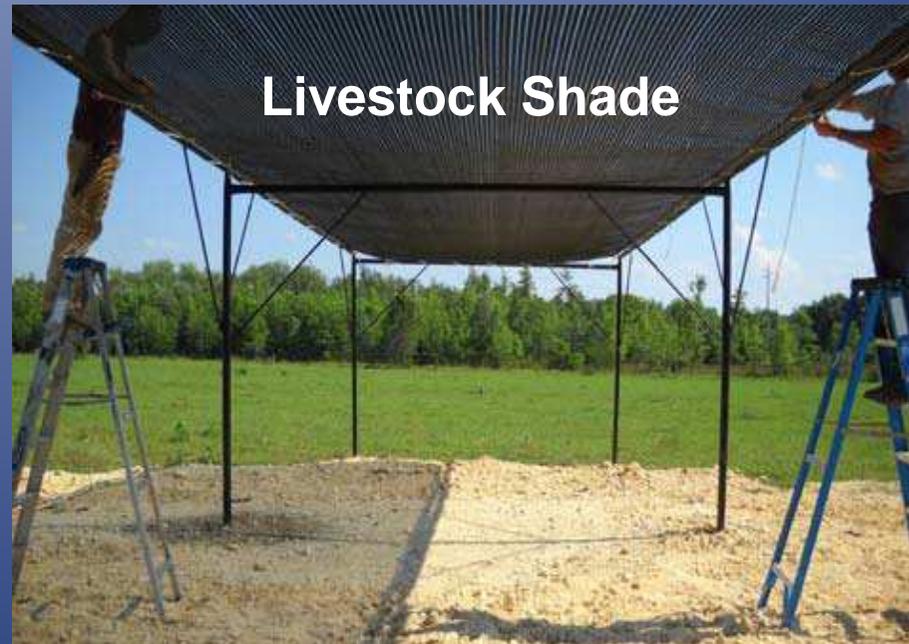
- Fencing - 19,087 ft
- Cover Crops - 1,528 ac
- Permanent Grass - 119 ac
- Livestock Shade Structures - 4
- Heavy Use Areas - 9

Erosion Control

- Ditches (rip rap) - 160 ft
- Ditches (matted) - 1,160 ft
- Sediment Basin - 1
- Lime Rock Paving - 3,000 ft
- Head Wall/Rip Rap Sidewalls - 1
- Underground Outlets w/Risers - 3
- Critical Planting - 3 ac

Water Quality

- Conventional Well - 1
- Solar Well - 1
- Stream Crossing - 1
- Dug Pond - 1
- Watering Facilities - 4



Dundee Road - Site 1

Bridge Site



Work performed on culverts

Completion of Dundee Road - Site 1



Sediment Basin Above Bridge on Dundee Road



Need for a sediment basin

Installation of sediment basin with pipe and grass to filter sediment before entering stream



Stabilization of Dundee Road



**Need for erosion
stabilization**

**Installation of 3,000 ft. of
crush and run on Dundee
Road prevents sediment
runoff into the Branch**



Stabilizing Soil Runoff into Dowling Branch



Banks needing stabilization

Grading, shaping, and stake matting with seed installed to stabilize runoff into Dowling Branch



Road Ditches Stabilized from Runoff with Matting and Seeding



Tile Outlets in Active Fields



Gully erosion in an active field adjoining Dowling Creek



Runoff is redirected through outlet pipe

Heavy Use Area Protection



Stabilizes sensitive areas and improves livestock health, air quality, water quality and soil erosion.

Cross Fencing



Allows livestock to be rotated from field to field

Exclusion Fences



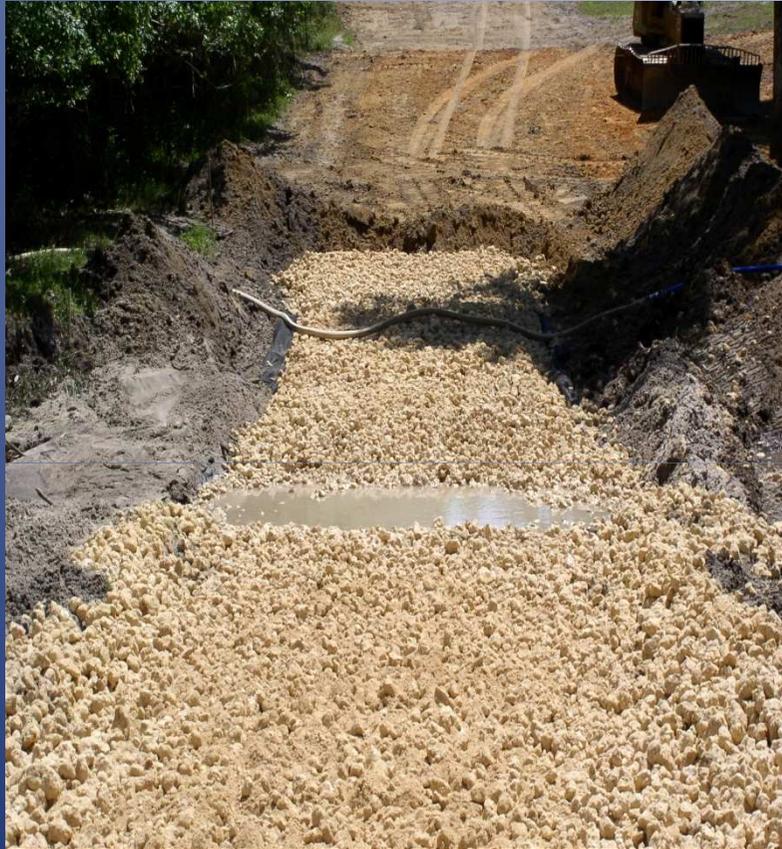
Keeps livestock from sensitive areas

Fencing Out Streams and Ponds



Protects water quality

Stream Crossing



Provides access for livestock and equipment through sensitive areas to other pastures

Livestock Practices



Watering facilities and livestock shade structures keep livestock from wet and sensitive areas

Solar Well System



Geneva County's first solar well was installed in a pasture where water was needed but not available

Solar Well System



5,000 gallon water storage tank was included in the solar well system

Watering Facility



Watering facility installed near the solar well

Ponds



Pond built to supply water for livestock

Partnerships

Wiregrass RC&D, along with NRCS through a CIG Grant, helped the Geneva County District acquire a no-till drill and a high residue crimper roller.



No-till drill is used to plant cover crops



Residue crimper roller keeps top soil in place, assisting producers with high residue farming

NRCS and the Geneva County SWCD are committed to helping people help the land through scientific-based, locally led voluntary conservation efforts.

Conservation success depends on our partners and customers.

USDA is an equal opportunity employer and provider