USDA

United States Department of Agriculture

Georgia's Land: Its Use and Condition

Natural Resources Conservation Service - National Resources Inventory

Fourth Edition

United States Department of Agriculture
Natural Resources Conservation Service

For over 80 years, the Natural Resources Conservation Service (NRCS) has been a pioneer in conservation, working with landowners, local and state governments, and other federal agencies to maintain healthy and productive working landscapes.

Congress passed Public Law 74-46, April 27, 1935, in which it recognized that *"...the wastage of soil and moisture resources on farm, grazing, and forest lands ... is a menace to the national welfare,"* and it directed the Secretary of Agriculture to establish the Soil Conservation Service (SCS) as a permanent agency in the USDA. In 1994, Congress changed SCS's name to the NRCS to better reflect the broadened scope of the agency's concerns.

Helping People Help The Land

Dedication

This publication is dedicated to the men and women of the Soil Conservation Service, Natural Resources Conservation Service, and partners who have served as NRI field data collectors. Your expertise and diligent efforts throughout the years have made this publication possible.

Photo credits:

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For more information contact the Georgia NRCS state office at 706-546-2272.

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Our Land – Our Future

"…civilization itself rests upon the soil." - Thomas Jefferson

Since the founding of the Natural Resources Conservation Service and the Georgia Soil and Water Conservation Districts, our conservation partnership has relied on sound science and locally led conservation to guide more than 80 years of conservation success. The lessons learned and the successes achieved are the result of fruitful cooperation that continues today. This publication represents one more example of this cooperation.

In order to plan for the future, we have to know the past. That is why we are excited about the release of this fourth edition of *Georgia's Land: Its Use and Condition*. This publication, a result of the National Resources Inventory program, reports how our use of the land has changed since 1982. It presents data identifying trends the public and decision makers can use to guide the direction of our future conservation efforts.

Of the many stories told by the data, one that stands out is while it took 250 years to develop 2.3 million acres of Georgia's land into urban use, we have doubled that acreage in the 30 years from 1982 to 2012.

Another story that stands out is the net reduction of cropland by 2.6 million acres during the same 30 year period. This translates into less Georgia acreage available to produce food and fiber to help sustain the needs of a growing world population.

Through the 80 years of our conservation partnership, we have collaborated with farmers and other landusers to promote good stewardship of our soil and water resources. With responsiveness to challenges resulting from changing land uses and with ongoing support for conservation efforts, Georgia will continue to be a major provider for the future needs of our nation and world. We hope you will find this publication informative and share it with others. It is our hope that readers will better understand the use and condition of our land resource and the importance of wise stewardship.

Terrance O. Rudolph, State Conservationist
USDA Natural Resources Conservation Service

Dan Bennett, President
Georgia Association of Conservation Districts

National Resources Inventory

The fourth edition of *Georgia's Land: Its Use and Condition* presents 30 years of results from the National Resources Inventory (NRI). The NRI is conducted by the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS), in cooperation with Iowa State University's Center for Survey Statistics and Methodology. Land users, researchers, and the general public will find primary data and analysis regarding the status, condition, and trends of Georgia's land and surface water resources. The report is of particular interest for decision makers who plan and implement policies addressing resource concerns.

Example of 160 acre sample segment containing three subsample points.

The NRI is not a census of each acre of land, but is a statistical analysis of land use and resource conditions on non-federal lands in the United States. In Georgia, NRI data is collected on 23,160 point locations within 7,928 sample segments across the state which provides statistically reliable data at the state level. Margins of error for statistical estimates are provided in the appendix of data tables. NRI data is compiled, analyzed, and released nationally every five years. The release date for the data in this document was October 2015.

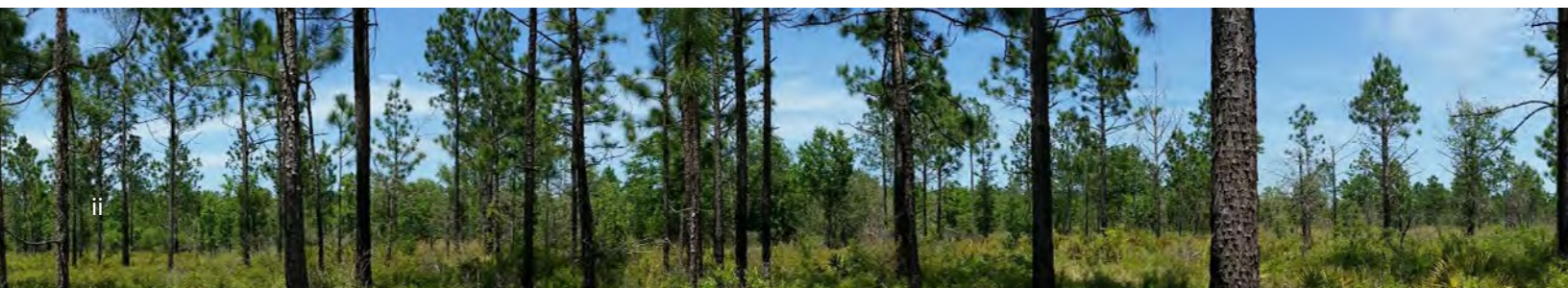
The NRI is uniquely suited to examine land use trends because:

- data has been collected on the same randomly selected sites since 1982
- it assigns 100 percent of surface area to unique, mutually exclusive broad cover/use categories
- it is easy to track lands as they change from one land use category to another
- most data collection definitions and protocols have remained consistent for 30 years
- protocols that have changed, such as erosion calculations, have been calibrated to results from previous years

The NRI's basic data themes are trends in land use, irrigation, prime farmland, soil erosion, and wetlands. In order to develop a more complete picture of Georgia's land and surface water resource condition, NRI data has been supplemented with other data sources in some sections of this document. These additional sources of data, such as the USDA National Agricultural Statistics Service, USDA Forest Service, and the U.S. Census Bureau, are referenced where used.

NRI data for the nation and information on data gathering procedures are available online at: http://www.nrcs.usda.gov/technical/nri/.

A useful compilation of NRI information and other agencies' data is at the Soil and Water Resources Conservation Act data viewer: http://www.nrcs.usda.gov/technical/rca/.



Georgia's Land: Its Use and Condition

Fourth Edition 2016

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Georgia Land and Surface Water Resource

Pasture, water, and other rural land (farm headquarters) in the Southern Piedmont.

Elevation and Terrain

Elevation and terrain affect the character of Georgia's land resource and its potential uses (Figure 1). The diverse terrain of the state ranges from the mountainous region of north Georgia, across the rolling hills of the piedmont, to the broad, nearly level coastal regions. Elevations range from 4,784 feet at Brasstown Bald Mountain to sea level along the Atlantic Ocean coastline (USDI 2009).

Major Land Resource Areas

Eight major land resource areas (MLRAs) occur in Georgia (Figure 1). MLRAs possess similar characteristics and are important for statewide, regional, and national planning. Criteria for MLRA delineation include physiography, geology, climate, water resources, soils, biological resources, and land use (USDA 2006). MLRAs in Georgia are: Southern Appalachian Ridges and Valleys; Sand Mountain; Southern Blue Ridge; Southern Coastal Plain; Southern Piedmont; Carolina and Georgia Sand Hills; Atlantic Coast Flatwoods; and Tidewater Area.

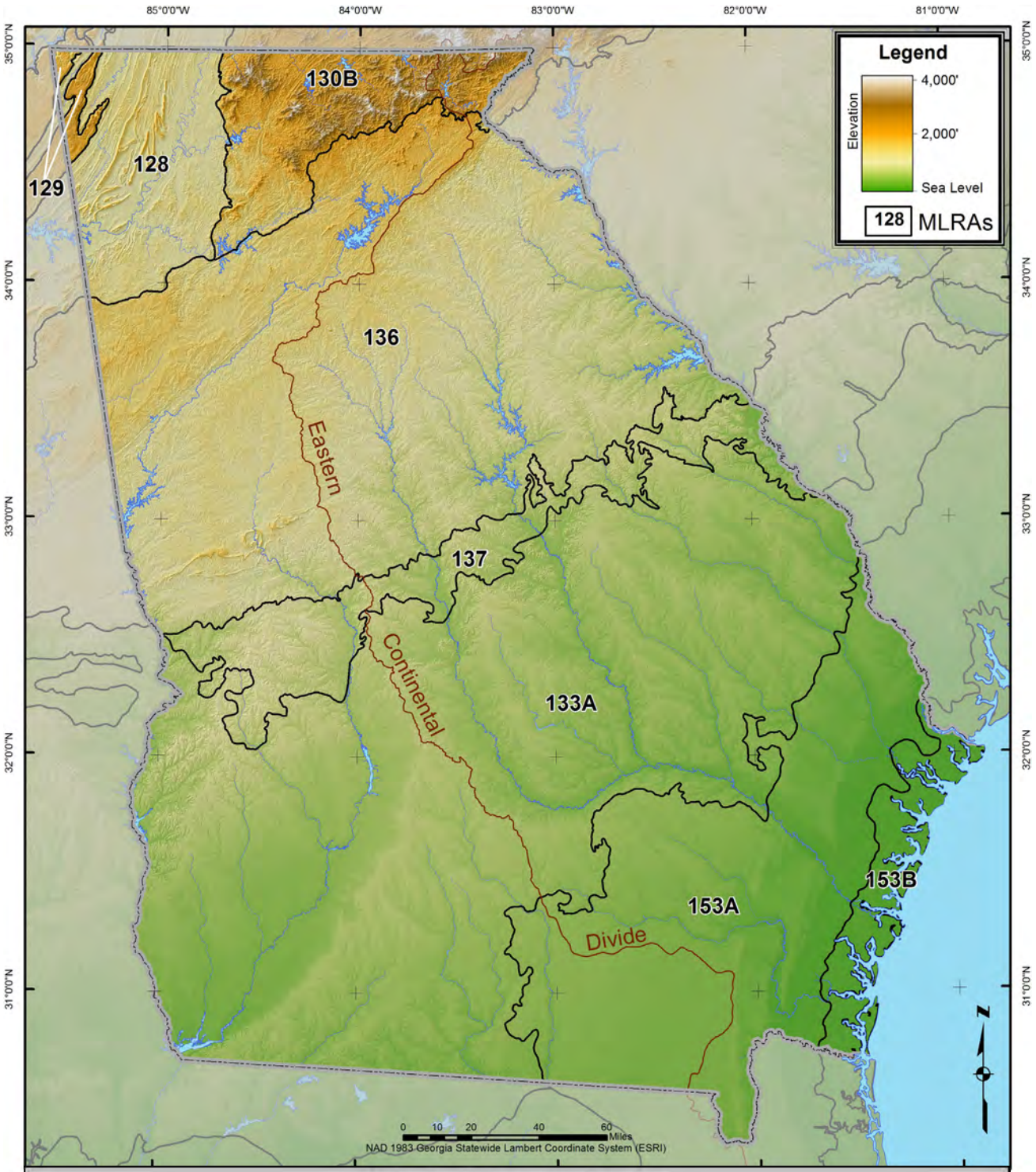
Soils

Soils vary across the state due to effects of five soil-forming factors: parent material, relief, climate, organisms, and time. The Southern Piedmont contains relatively more developed soils, while comparatively less developed soils occur in the Atlantic Coast Flatwoods and in active floodplains across the state. Different soils contribute to each MLRA's overall character. Each soil has properties that determine appropriate uses. Of particular importance is suitability for agriculture. The best land for agricultural use is called prime farmland, which is discussed further on page 7.

The Surface Water Resource

Surface water resources within Georgia's watersheds include rivers and associated tributaries, natural open water areas, and manmade water impoundments. Georgia is part of two major watershed basins on either side of the eastern continental divide (Figure 1). Most of the eastern part of the state drains into the Atlantic Ocean. Northern and western areas drain to the Gulf of Mexico. About 52 percent drains into the Atlantic Ocean and 48 percent drains into the Gulf of Mexico.

Cropland and forest in the Southern Blue Ridge.



Major Land Resource Area Key

Symbol	Name	Acres	Symbol	Name	Acres
128	Southern Appalachian Ridges and Valleys	1,806,700	136	Southern Piedmont	10,969,400
129	Sand Mountain	147,100	137	Carolina and Georgia Sand Hills	2,010,100
130B	Southern Blue Ridge	1,689,900	153A	Atlantic Coast Flatwoods	5,633,500
133A	Southern Coastal Plain	14,382,900	153B	Tidewater Area	1,100,900

Figure 1: Elevation, Terrain, Major Land Resource Areas (MLRAs) and Major Surface Waters.

Statewide Land Use 1982 to 2012

2012 Use and Distribution

The NRI found that Georgia's four largest land uses were forest, developed land, cropland, and pasture in 2012 (Figure 2a). These four land uses accounted for 88 percent of Georgia's total surface area of 37,740,500 acres.* Federal land, water, and other rural land accounted for the remaining acreage. Federal land is a land ownership category that is excluded from NRI land use classification. Water is a category consisting of permanent open water bodies and streams. Other rural land includes an assortment of miscellaneous land uses and land types such as farm headquarters, quarries, beaches, marshes, and rock outcrops.

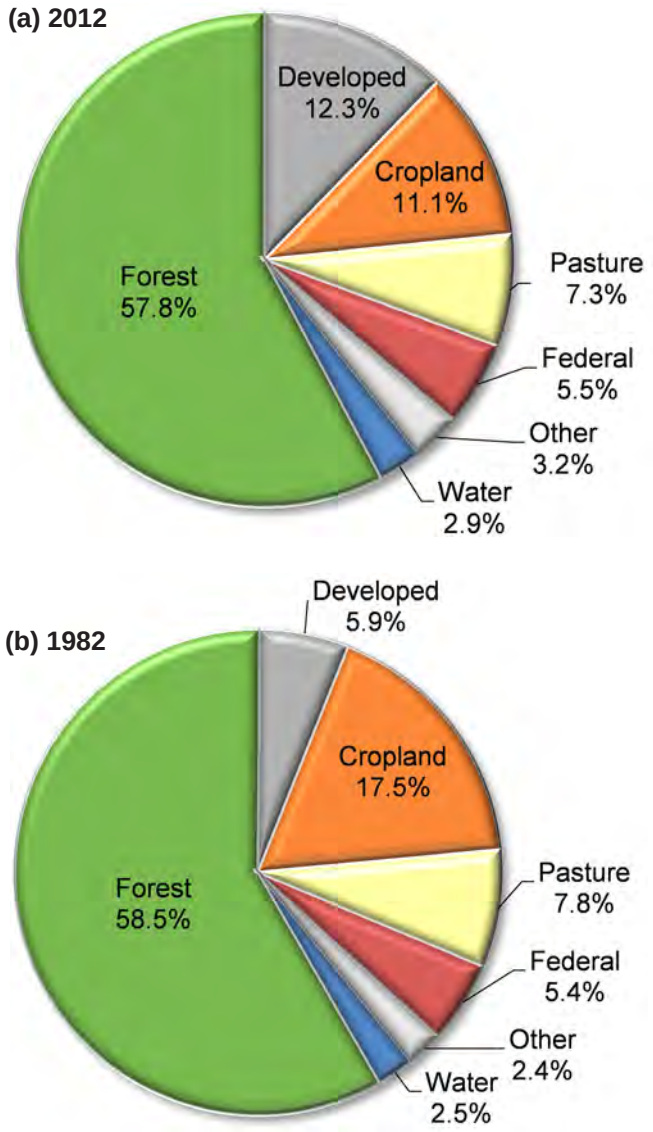


Figure 2: Surface area percentages in broad land use categories. **(a) 2012 (b) 1982.**

Distribution of land uses varied by MLRA. Forest accounted for the greatest percentage of land use in every MLRA with the exception of the Tidewater Area with its high percentage of marshland and open water. The Southern Coastal Plain was the MLRA with the highest percentage of cropland. Percentage of pasture was highest in the Southern Piedmont and Southern Appalachian Ridges and Valleys. Over half of developed land in the state was in the Southern Piedmont.

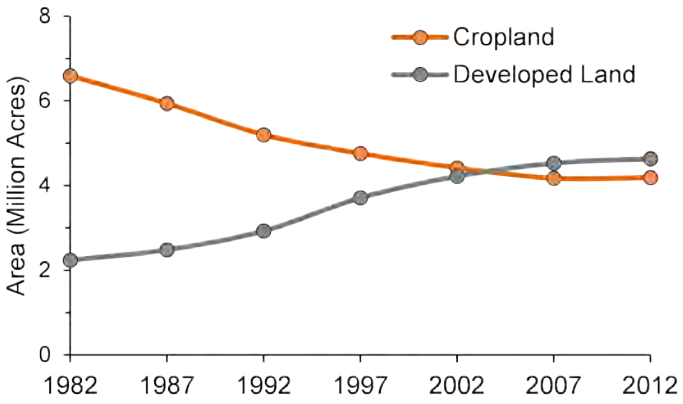


Figure 3: Cropland and developed land trends from 1982 to 2012.

1982 to 2012 Trends

Cropland and developed land accounted for the largest net changes statewide in land use during the period 1982 to 2012 (Figure 2). Acreage of developed land steadily increased until it exceeded cropland acreage around 2004 (Figure 3). By 2012, developed land had doubled from the amount reported in 1982. The net acreage of cropland steadily decreased in the same time

**The NRI total acreage does not include the approximately 300,000 acres of territorial waters which are included in U.S. Census data.*

period, although only a portion of the cropland acreage decrease could be attributed to direct conversion to developed land.

Generalized exchanges among the largest four land uses are shown in figure 4. There were active exchanges in and out of the cropland category, which resulted in a significant net acreage decrease. There were also active exchanges in and out of the forest and pasture categories, even though the net acreages in each category stayed roughly the same. Change to developed land was essentially one-way. Once land is converted to developed land, it rarely changes back. Most of the cropland acreage decrease was accounted for by change to forest and pasture use. Most of the developed land acreage increase was accounted for by conversion from forest.

Water, which accounts for a smaller, yet important portion of the state, saw a significant increase due primarily to construction of water impoundments. In 2012, surface water resources totaled about 1.1 million acres, which was a 15 percent increase from 1982. Other rural land saw an increase in the inventory period as well.

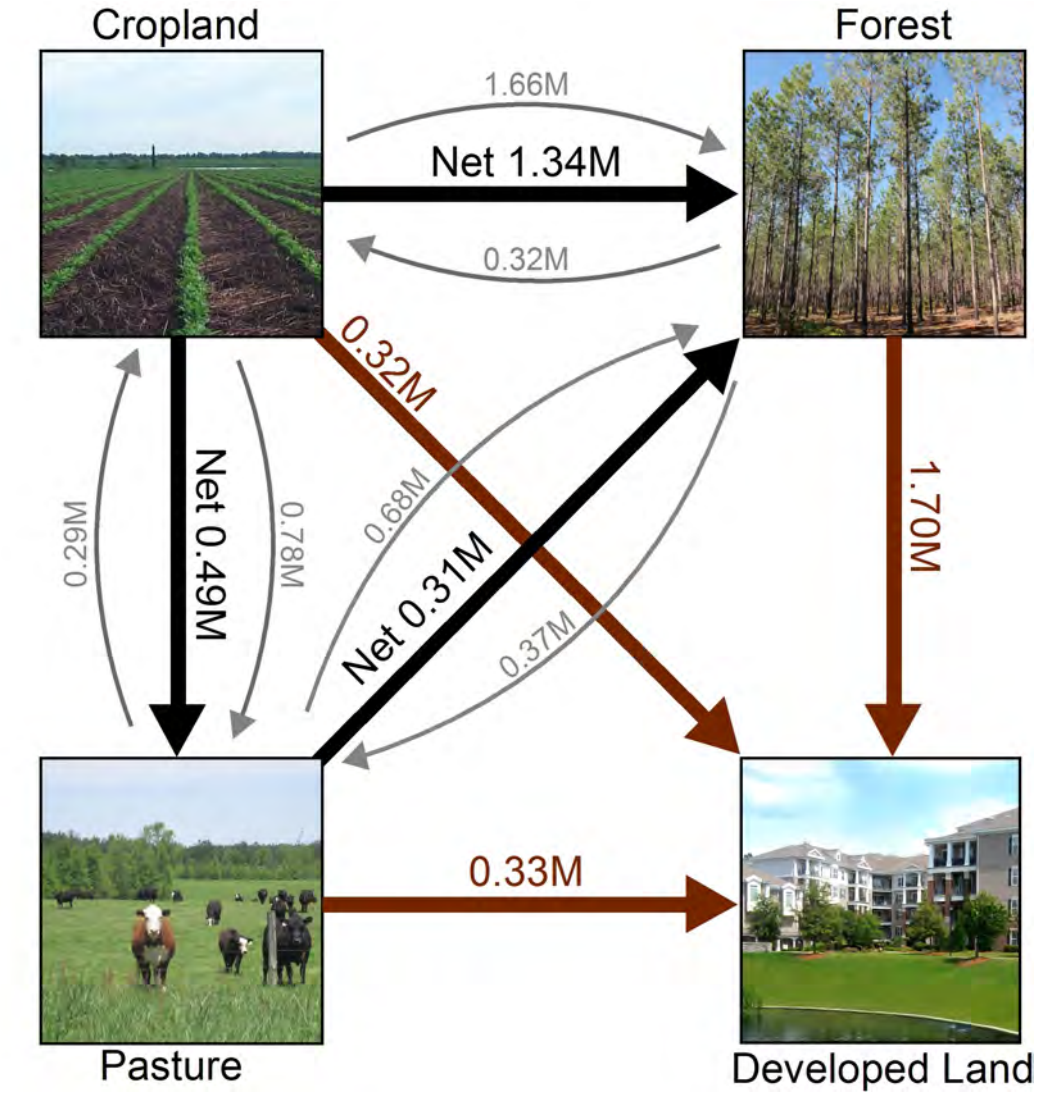


Figure 4: Exchanges among Georgia's four largest land use categories from 1982 to 2012. M = million acres.

Cropland 1982 to 2012

2012 Use and Distribution

In 2012, about 4.2 million acres were used for cropland (Figure 5). The NRI classifies cropland as either cultivated cropland or non-cultivated cropland. Cultivated cropland includes row crops such as cotton and peanuts, and close grown crops such as wheat and rye. Non-cultivated cropland includes perennial crops such as pecans and blueberries. Of the total 2012 acreage, about 3.6 million acres were used for cultivated crops. About 610,000 acres were used for non-cultivated crops.

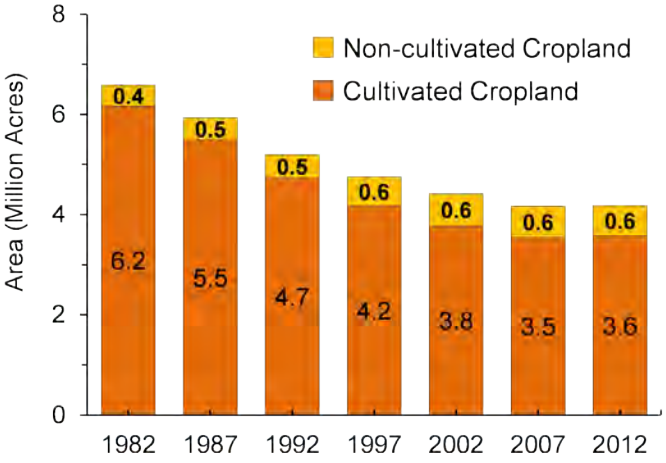


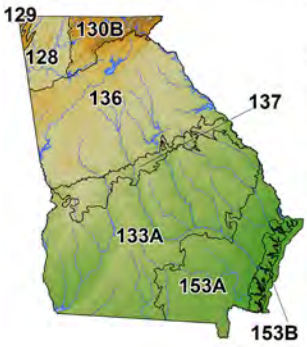
Figure 5: Cropland acres from 1982 to 2012.

As illustrated in figure 6, percentage of land used for cropland in 2012 varied significantly by MLRAs across the state. The Southern Coastal Plain (133A) had the most cropland at about 3.3 million acres. This is 23.2 percent of the MLRA's total area in Georgia. There were also significant portions of cropland in the Atlantic Coast Flatwoods (153A), the Southern Appalachian Ridges and Valleys (128), and the Carolina and Georgia Sand Hills (137) at 7.2 percent, 5.8 percent, and 5.5 percent respectively. The Southern Piedmont (136) had 2.0 percent and the Southern Blue Ridge (130B) 0.6 percent. The Tidewater Area (153B) and Sand Mountain (129) contained essentially no cropland.

Irrigated peanuts on cultivated cropland in the Southern Coastal Plain.

1982 to 2012 Trends

During the period 1982 to 2012, net cropland acreage decreased more than any other land use (Figure 5). Cultivated cropland accounted for the entire decrease in acreage. In 1982, about 6.2 million acres were used for cultivated cropland, declining to about 3.6 million acres in 2012. During the same period, non-cultivated cropland increased in acreage from about 430,000 to 610,000. All MLRAs saw a net decrease in cropland, with the Southern Coastal Plain's decrease of about 1.7 million acres the largest. Cropland acreage steadily decreased throughout the first 20 years, then stabilized during the last 10 years of reporting.



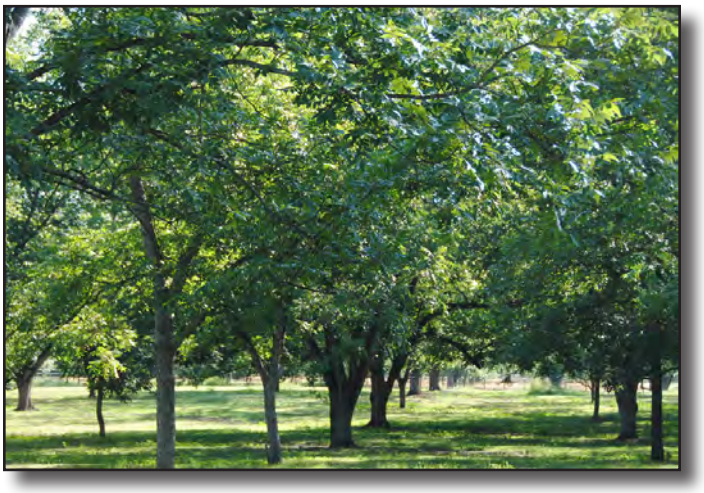
MLRA	1982	2012
128	8.9	5.8
129	0.5	0.1
130B	1.5	0.6
133A	34.8	23.2
136	5.5	2.0
137	13.0	5.5
153A	9.5	7.2
153B	0.0	0.0

Figure 6: Distribution of cropland by MLRA. Percentage of MLRA surface area in cropland.

Crops Planted in Georgia

Acreages of the specific crops grown changed significantly during the inventory period. Figure 7 shows acreage of the top five cultivated commodity crops planted from 1982 to 2012. Cotton acreage increased by a factor of seven, while soybean acreage decreased by a factor of 15. Soybeans accounted for the most acreage planted in 1982 with about 2.4 million acres but accounted for the least with about 160,000 acres by 2012. Cotton accounted for the least acreage of the top five crops in 1982 with about 240,000 acres but the most in 2012 with about 1.8 million acres. Corn was second in acreage in 1982 with about 1.5 million acres but declined to about 390,000 acres by 2012. Peanuts showed an increase from about 560,000 acres in 1982 to about 690,000 acres in 2012. Wheat declined from about 580,000 acres in 1982 to about 210,000 acres in 2012.

Commodity crops account for the majority of cultivated cropland acreage in Georgia, but other crops occupying less land have a large influence on the state's agricultural economy. Tobacco accounted for about 70,000 acres in 1982 but decreased to only about 6,000 acres by 2012. Vegetables and melons are combined into one category by the NRI and totaled about 120,000 acres in 2012, increasing from about 60,000 in 1982. According to the National Agricultural Statistics Service's (NASS) 2012 Census of Agriculture, sweet corn, watermelons, onions, snap beans, and cucumbers were the top crops in this category, ranked by harvested acreage (USDA 2014).



Pecan orchard, an example of non-cultivated cropland, in the Southern Coastal Plain.

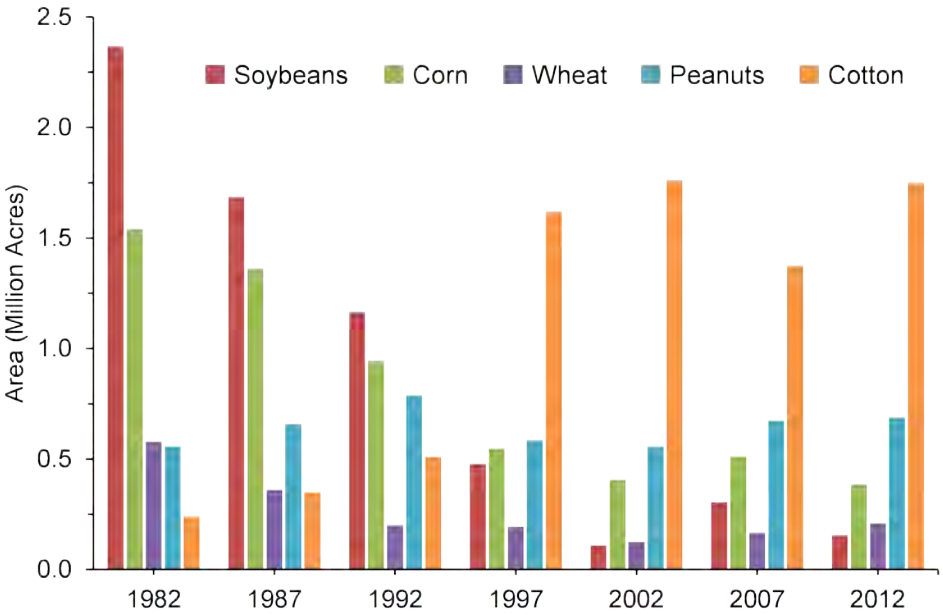


Figure 7: Acres of specific cultivated commodity crops planted from 1982 to 2012.

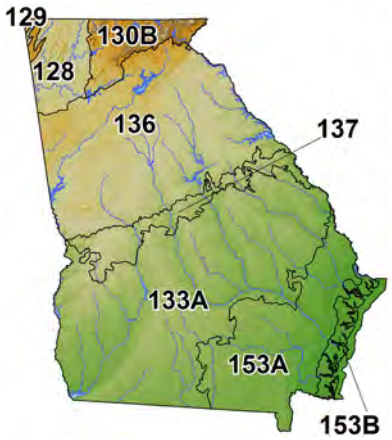
Non-cultivated crops are combined by the NRI into general categories such as nuts, bush fruit, orchard, and vineyard. Non-cultivated cropland in the 2012 NRI was about 610,000 acres, an increase of about 180,000 acres from 1982. The NASS 2012 Census of Agriculture reported specific non-cultivated crops. It listed pecans, blueberries, peaches, grapes, and apples as the top non-cultivated crops, ranked by harvested acreage.

Prime Farmland and its Use 1982 to 2012

Prime Farmland

Prime farmland, as defined by USDA, is land with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for such uses (USDA 2016a). Such land produces highest yields with a minimum investment of conservation practices, energy, and other inputs.

In 2012, NRI reported about 7 million acres of prime farmland in Georgia. According to NRCS gridded soil survey geographic (gSSURGO) data the Southern Coastal Plain (133A), Southern Appalachian Ridges and Valleys (128), Southern Piedmont (136) and Carolina and Georgia Sand Hills (137) MLRAs had the highest concentrations of prime farmland (USDA 2016b). Sand Mountain (129), Atlantic Coast Flatwoods (153A), Southern Blue Ridge (130B) and Tidewater Area (153B) had the lowest concentrations (Figure 8).



MLRA	Prime Farmland
128	19.0
129	8.8
130B	2.3
133A	40.3
136	17.4
137	15.1
153A	3.3
153B	0.2

Figure 8: Distribution of prime farmland by MLRA. Percent of gSSURGO soil map units of each MLRA rated as prime (USDA 2016b).

Use of Prime Farmland

Total prime farmland acreage decreased about 550,000 acres during the 30 year inventory period. Almost all of the decrease in prime farmland acreage was due to irreversible conversion to developed land. Land use of the remaining prime farmland acreage trended strongly away from cultivated cropland and toward forest (Figure 9). Cultivated cropland was the only use of prime farmland that decreased during the period, while use of prime farmland for forest increased the most of any category. Although relatively small in acreage, the percentage of non-cultivated cropland on prime farmland increased significantly. Pasture accounted for only slightly more acreage of prime farmland in 2012 than in 1982.

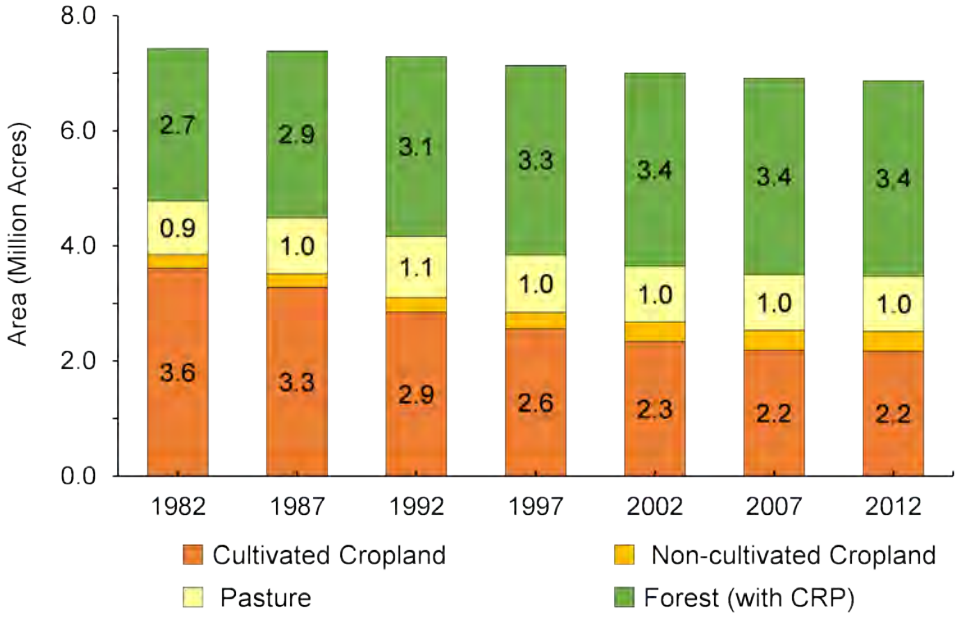


Figure 9: Prime farmland use from 1982 to 2012.

Agricultural Soil Erosion 1982 to 2012

Soil erosion is a natural process caused by water, wind, and other forces. Some soil erosion is inevitable, but it becomes a major threat when it exceeds soil loss tolerance levels* that support sustained crop productivity. Soil erosion results in loss of soil organic matter and fertility, increased runoff, less available soil moisture, and increased sediment deposits downstream.

An estimated 20.4 million tons of soil loss occurred due to sheet and rill erosion on Georgia's 3.6 million acres of cultivated cropland in 2012 (Figure 10). This represents a significant reduction when compared to an estimated 34.8 million tons in 1982. However, this was primarily due to the reduction in cultivated cropland acreage from 6.2 million acres in 1982 to 3.6 million in 2012, rather than a reduction in the rate of soil loss.

The average annual rate of soil loss on cultivated cropland in Georgia was 5.7 tons/acre/year in 2012. This is slightly higher than the 5.6 tons/acre/year reported in 1982. However, between 1982 and 2012 the soil loss rates reduced, reaching a low point in 1992 at 4.8 tons/acre/year before rising again (Figure 11).

Other land uses showed lower rates of erosion than cultivated cropland. Pasture and non-cultivated cropland averaged 0.5 tons/acre/year over the 30 years of NRI. Lands enrolled in the Conservation Reserve Program (CRP), which is fully discussed on page 11, had an initial rate of erosion of 4.4 tons/acre/year. However, rates rapidly declined on CRP lands after being planted to permanent vegetation and stabilized to an average of 0.5 tons/acre/year during the last 20 years of the inventory period. These lower rates of erosion demonstrate the soil-holding ability of perennial and/or close growing vegetation as opposed to cultivated cropland.

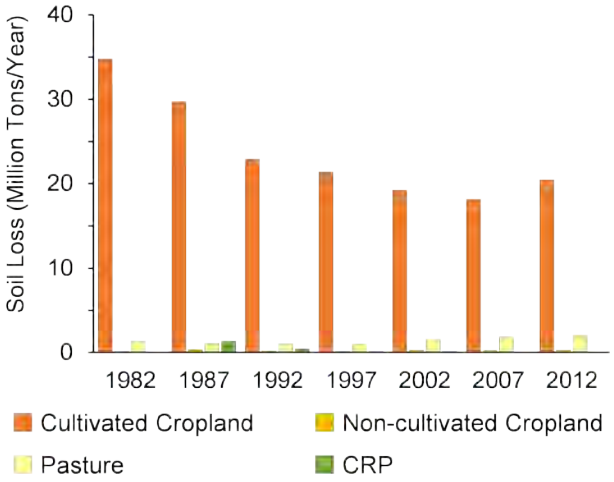


Figure 10: Total tons of soil lost from 1982 to 2012.

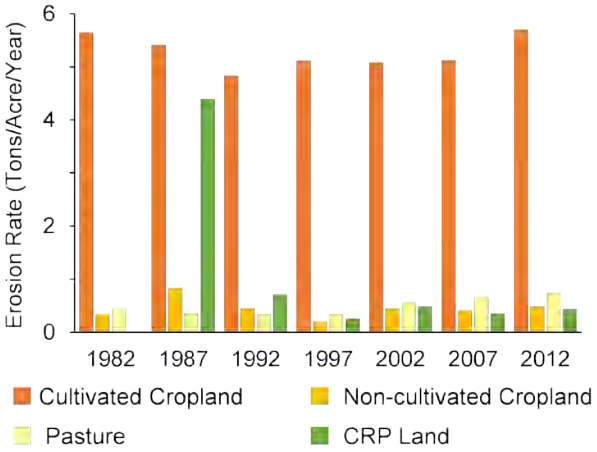


Figure 11: Erosion rate (tons/acre/year) from 1982 to 2012 on agricultural land uses.

Soil loss estimates currently are calculated using on-site data and the Revised Universal Soil Loss Equation (RUSLE2), a guide for making methodical decisions in conservation planning and practice application (USDA 2013). The Universal Soil Loss Equation (USLE) was used during the first 25 years (Wischmeier 1978). Erosion estimates do not represent sediment yield, which is the amount of soil that enters streams, rivers, and lakes. NRI only estimates erosion on cropland, pasture, and CRP land. Wind erosion is not considered a significant problem in Georgia and is not measured by NRI.

Soil loss tolerance levels, as determined by NRCS, range from one to five tons/acre/year depending on the soils (USDA 2016a).

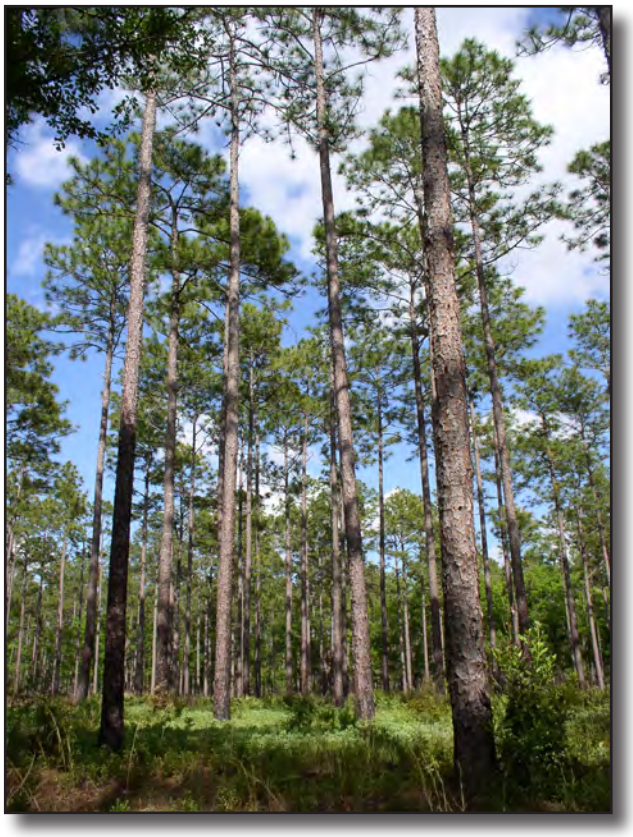
Forest 1982 to 2012

2012 Use and Distribution

Forest was the largest land use in all years of the inventory. In 2012, non-federal forest covered 21.8 million acres, or 57.8 percent of the state's surface area (Figure 12). Forest is defined in the inventory as land with at least 25 percent tree canopy not used for nut or fruit orchards. Forest includes cutover land where forest trees are regenerating.

Distribution of forest in the state's MLRAs is explained in figure 13. Sand Mountain (129) had the highest concentration of non-federal forest reported in the NRI at 81.4 percent. The lowest concentration of forest was the Tidewater Area (153B) at 20.1 percent.

In some areas, interpreting NRI forest values is complicated because NRI excludes federal land from its land use classification. For instance, non-federal forest acreage in the Southern Blue Ridge (130B) was 750,000 acres (44.6 percent) in 2012. However, another 650,000 acres (38.4 percent) in 130B was federally owned. A dominant portion of this federal land was in forest, but exactly how much was not inventoried.



Slash and longleaf pine forest in the Atlantic Coast Flatwoods.

1982 to 2012 Trends

The total acreage of non-federal forest stayed nearly the same. It was 22.1 million acres in 1982 and 21.8 million acres in 2012. While the total acreage of forest stayed almost the same, there have been large changes in the location and nature of forest in the state. The conversion of 1.7 million acres of forest to developed land almost equaled the planting of 1.6 million acres of cropland or pasture to pine plantations.

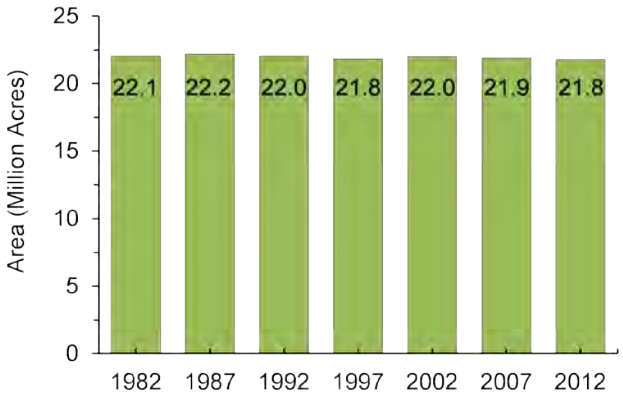
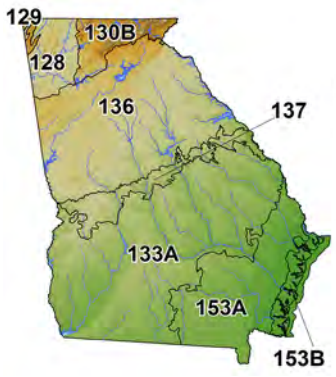


Figure 12: Non-federal forest acreage from 1982 to 2012.



MLRA	1982	2012
128	58.2	51.1
129	85.9	81.4
130B	51.1	44.6
133A	51.4	57.9
136	63.4	56.5
137	65.2	66.3
153A	72.4	69.8
153B	26.0	20.1

Figure 13: Distribution of non-federal forest by MLRA. Percentage of MLRA surface area in non-federal forest.

Forest Type and Management

Georgia is home to about 250 species of trees according to the Georgia Forestry Commission (Bishop 2001). The Forest Inventory and Analysis (FIA) program of the USDA Forest Service groups these trees by forest type which are shown in figure 14 (Brandeis 2016). Pine is at least partly dominant in 56 percent of the forests and wholly dominant in 45 percent. Loblolly-shortleaf pine accounts for the single largest group. The longleaf-slash pine group is largely a planted group. Over the inventory period the trend has changed from primarily planting slash pine to an increased interest in restoring longleaf pine. Oak species are a major component of all the other forest type groups. The largest of these others is oak-hickory. The oak-gum-cypress is the wettest with some of its members able to grow in standing water.

Georgia's pine forests have become more highly managed over the inventory period. Figure 15 shows the trends of naturally regenerated and planted pine stands from 1972 to 2014. Planted stands increased by about 4.1 million acres while naturally regenerated stands decreased by about 5.2 million acres. According to other data from the FIA program, hardwood species displayed declining net growth during the period.

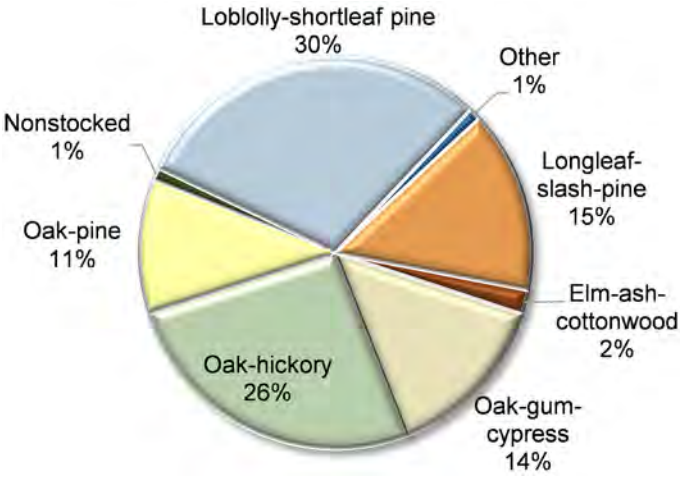


Figure 14: FIA forest type groups shown in 2014 (Brandeis 2016).

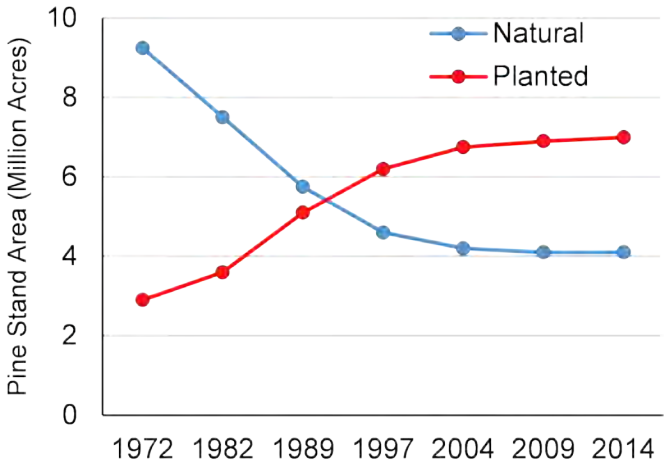


Figure 15: FIA measured trends of natural or planted pine stands' area from 1972 to 2014 (Brandeis 2016).

Hardwood forest growing in the Southern Piedmont.

Conservation Reserve Program

The CRP is a land retirement conservation program administered by USDA's Farm Service Agency (FSA). The long-term goal of the program is to improve water quality, prevent soil erosion, and reduce loss of wildlife habitat. In exchange for a yearly rental payment, environmentally sensitive land is removed from agricultural production, and plant species appropriate for resource conservation are established. Contracts for land enrolled in CRP are 10 to 15 years in length. CRP was enacted with the 1985 Farm Bill.

Acreage enrolled in CRP varied widely during the inventory period (Figure 16). Since it was not authorized until 1985, no acreage was in CRP in 1982. In 1992 and 1997, CRP enrollment peaked at about 600,000 acres. CRP enrollment declined in 2007 and 2012 primarly due to higher agricultural commodity prices. NRI trend analysis shows about 820,000 acres have been in CRP during the program's existence. This acreage differs from adding the totals of all the five-year NRI reporting periods in figure 16 because all CRP contracts extend beyond more than one reporting period. Additionally, some lands have been enrolled in multiple contracts.

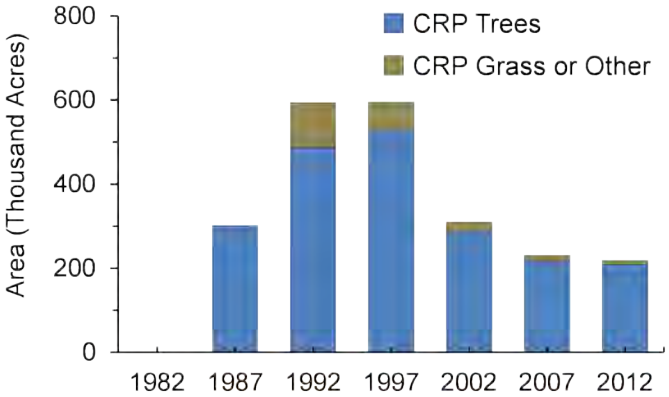


Figure 16: Acres enrolled in CRP from 1982 to 2012. (Program did not begin until 1985 Farm Bill).

CRP land in the Southern Piedmont – loblolly pine plantation.

CRP promotes the planting of conservation cover, which can be different types of woody or herbaceous vegetation. Pine trees have always been the primary cover type established in Georgia. There was some initial interest in grass cover which rapidly declined following the 1992 reporting period (Figure 16).

Pasture 1982 to 2012

Pasture is defined in the inventory as land used primarily for the production of domesticated forage plants that can be used for grazing livestock. Georgia's total pasture stayed nearly the same from 2.9 million acres in1982 to 2.7 million acres in 2012 (Figure 17). While the net acreage was nearly the same, about 1.4 million acres of pasture were converted to other land uses during the inventory period. However, that was offset by 1.2 million acres of other lands that were converted to pasture.

Distribution of pasture was more uniform than cropland distribution among Georgia's MLRAs in 2012 (Figure 18). The Southern Piedmont (136) accounted for the most pasture at about 1.2 million acres, although this is only 10.7 percent of the MLRA's total surface area. Other MLRAs showed significant percentages of pasture in 2012: Southern Appalachian Ridges and Valleys (128), 16.7 percent; Sand Mountain (129), 6.5 percent; Southern Coastal Plain (133A), 6.4 percent; and Carolina and Georgia Sand Hills (137), 5.9 percent. Smaller percentages of pasture were reported in the Southern Blue Ridge (130B) and Atlantic Coast Flatwoods (153A) at 4.5 percent and 2.5 percent respectively. There was essentially no pasture reported in the Tidewater Area (153B).

Cattle on rotational grazing management pasture in the Southern Piedmont.

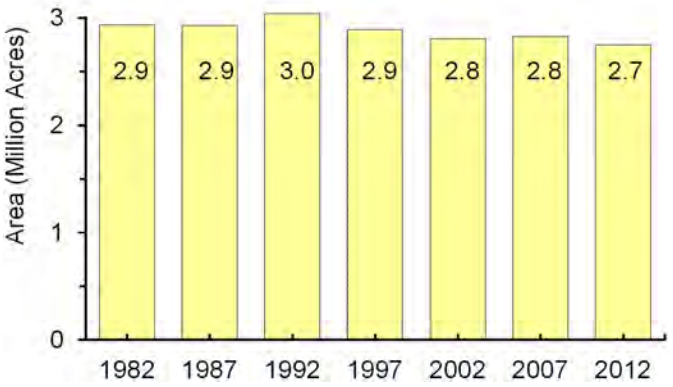
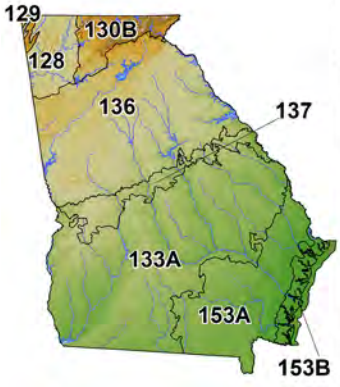


Figure 17: Total acres of pasture from 1982 to 2012 .

Black angus cattle grazing switchgrass in the Southern Piedmont.



MLRA	1982	2012
128	17.4	16.7
129	6.6	6.5
130B	3.9	4.5
133A	6.3	6.4
136	13.3	10.7
137	4.7	5.9
153A	1.4	2.5
153B	0.0	0.2

Figure 18: Distribution of pasture by MLRA. Percentage of MLRA surface area in pasture.

Developed Land 1982 to 2012

NRI defines developed land as a combination of urban-built up land and rural transport. Urban-built up is residential, industrial, commercial, and institutional land. Urban-built up land includes construction sites; public administrative sites; railroad yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment plants; water control structures and spillways; and small parks (less than 10 acres) within urban and built-up areas. Also highways, railroads, and other transportation facilities are included in urban-built up if they are surrounded by urban areas. Rural transport is highways, roads, railroads, and their right-of-ways outside urban and built-up areas.

Developed land acreage doubled from 1982 to 2012, increasing from about 2.2 to 4.6 million acres. Accordingly, developed land was the most rapidly growing land use category during the 30 year inventory period (Figure 19). Developed land accounted for 12.3 percent of Georgia's total surface area by 2012, most of any category except forest. Within the developed land category, urban-built up land increased from about 1.7 million acres to 4 million acres. Rural transport increased from 580,000 to about 640,000 acres. Figure 20 shows aerial photograghs of development over the inventory period.

The increase in developed land coincided with a rapidly increasing human population (Figure 21).

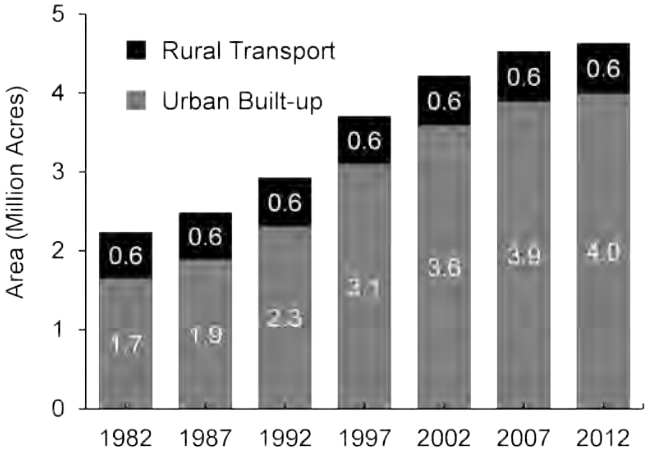


Figure 19: Developed land in Georgia from 1982 to 2012.

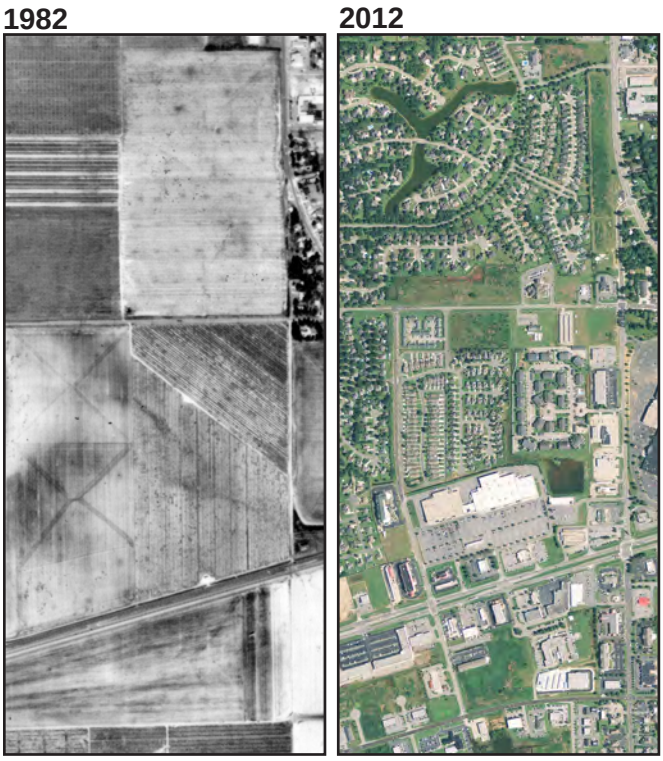


Figure 20: Aerial photography depicting conditions of the same area in 1982 and 2012. This area was predominantly prime farmland prior to development.

In 1980, Georgia's total population was 5.5 million. This increased to 9.7 million by 2010 (U.S. Census 2012). The proportion of the population living in urban areas increased from 1980 to 2010. Urban population was 3.4 million in 1980 and increased to 7.3 million in 2010. In the same time period, rural population rose slightly, from 2.1 million to 2.4 million.

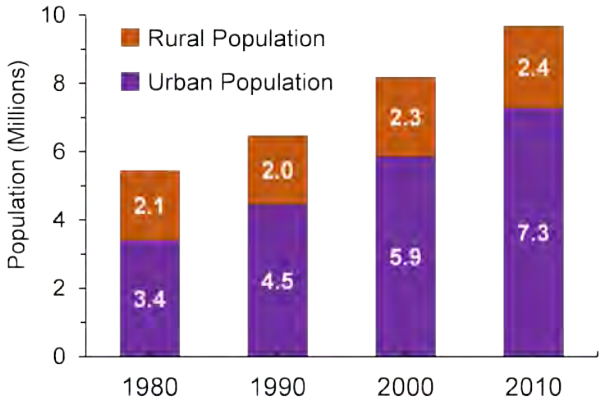


Figure 21: Population from 1980 to 2010, roughly covering the survey period. (U.S. Census 2012).

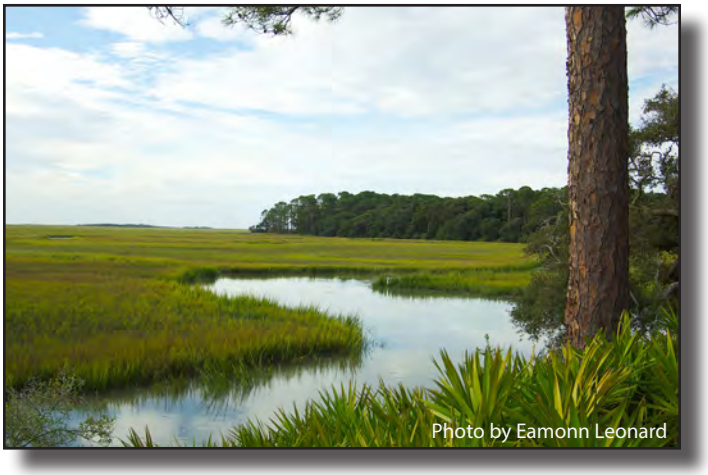
Wetlands and Deepwater Habitats

NRI categorizes and reports wetlands and deepwater habitats according to *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979), often referred to as the Cowardin classification. Deepwater habitats are areas too deeply covered with water for emergent plant growth. Wetlands are lands where flooding, ponding, and/or soil saturation are the dominant factors determining the nature of soil development and the types of plants and animals living there. Wetlands have significant value associated with water quality, flood and sediment control, nutrient cycling, wildlife habitat, and groundwater recharge.

Wetlands and deepwater habitats are components of the five major systems of the Cowardin classification. The five major systems are Marine,* Estuarine, Riverine, Lacustrine, and Palustrine. Estuarine systems include tidal wetlands and associated deepwater habitats. Riverine systems are confined within a channel containing moving water. Lacustrine systems are lakes or ponds. Palustrine wetlands are primarily non-tidal wetlands dominated by trees, shrubs, and persistent emergent plants.

Gum swamp in the Southern Coastal Plain - an example of a Palustrine system.

NRI reported about 7.5 million acres of wetland and deepwater habitat systems in 2012 (Figure 22). There were 1.1 million acres of streams and permanent open water reported by NRI. NRI's streams and permanent open water roughly correspond to deepwater habitat as defined by the Cowardin classification. Palustrine wetlands was the largest system at around 6.1 million acres. Riverine systems accounted for the least acreage at about 190,000 acres.



Salt marsh – the Estuarine system of the Tidewater Area.

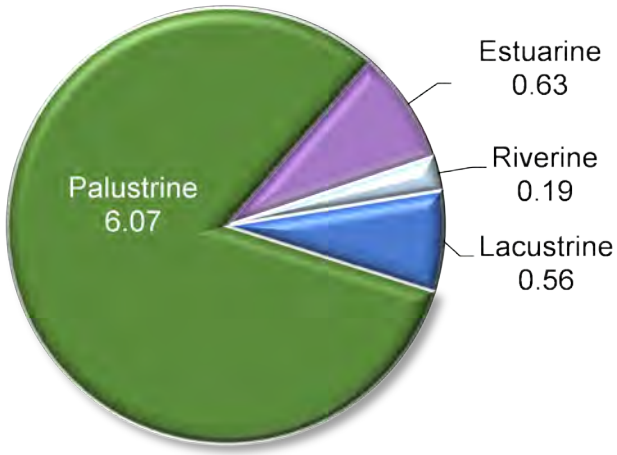


Figure 22: Area of the 4 major categories of Cowardin wetland type reported in NRI (million acres).

**Marine systems are not reported in NRI.*

Conclusions

An organic farm in the Southern Blue Ridge MLRA utilizing high tunnel farming techniques and producing specialty crops such as Jerusalem artichoke.

The information in this document displays the dramatic speed and vast scale of land use change affecting our land resources. The equivalent of over 20 percent of Georgia's surface area has been involved in some form of land use change during the inventory period. The doubling of developed land to 4.6 million acres over 30 years shows both the speed and the scale of the dynamics. These dramatic land use changes illustrate a need for awareness and adaptation going forward. Our growing population must address and balance its need for all land uses.

Just as a new generation uses the land, a new generation of ideas governs land management. For instance, some of the newer approaches to managing the land for agriculture include increased interest in specialty crops, small scale, and urban farming. The NRCS and its conservation partners are supporting new ideas by adapting programs and practices to meet these changes, while continuing to meet the conservation needs of traditional farming.

We hope this document has presented a clear and unfiltered portrait of the rich endowment in natural resources Georgians enjoy. Georgia's diverse agriculture provides food and fiber to a growing world population. Our forests provide clean air and support many uses from timber to wildlife habitat to recreation. Our water and wetlands support productive wildlife habitat, drinking water, agriculture, industry, and recreation. Other rural land contains important economic sectors including livestock operations, mining, and seafood, among others. Conservation of our rich resource endowment is our responsibility to the next generation.

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Appendix: Data Tables

Tables

Data Useage Notes

[1]Pasture and forest are labels unique to this Georgia publication. National NRI labels these categories pastureland and forest land. The values and definitions are the same, only the labels are changed.

[2]Federal land is not counted as a land cover/use, but a surface area category, since NRI does not measure the land use of land owned by federal agencies.

[3]Total surface area, large water, federal land, and CRP (CRP totals only, change and MLRA values are estimated) are determined from administrative sources and therefore do not have associated margins of error.

[4]Instances where the margin of error is greater than or equal to the estimate -- shown in *red italics* -- indicate that the confidence interval includes zero and that the estimate should be used with caution.

[5]CRP did not begin until 1985.

[6]Although CRP had begun in 1987, information on practices applied was not available until the 1992 cycle due to lag time between contract approval and practice application.

Table 1: Broad land cover/use categories, water, and federal land by year. Estimates and margins of error in thousands of acres.

Year	Land Cover / Uses								Surface Area Categories[2]			**Total**
	Cropland					Developed Land			Water			
	Cultivated Cropland	Non-Cultivated Cropland	Pasture[1]	Forest[1]	Other Rural Land	Urban Built-up	Rural Transport	CRP Land[3]	Small Water	Large Water[3]	Federal Land[2,3]	**Total Surface Area[3]**
1982	6,163.5 ±208.8	429.3 ±72.7	2,937.1 ±174.2	22,063.8 ±374.4	923.9 ±116.5	1,658.3 ±121.8	579.9 ±16.1	0.0 --	417.6 ±23.1	518.1 --	2,049.0 --	**37,740.5**
1987	5,487.9 ±208.3	450.5 ±72.8	2,929.6 ±154.9	22,193.6 ±356.9	895.4 ±111.8	1,889.3 ±132.8	594.4 ±15.5	301.8 --	422.4 ±23.5	519.5 --	2,056.1 --	**37,740.5**
1992	4,730.0 ±264.3	471.2 ±66.5	3,039.2 ±167.5	22,047.7 ±388.9	878.6 ±106.9	2,308.7 ±140.7	618.3 ±17.9	593.7 --	456.6 ±24.7	521.8 --	2,074.7 --	**37,740.5**
1997	4,176.2 ±186.0	582.3 ±63.4	2,891.5 ±167.1	21,849.5 ±375.6	859.6 ±121.8	3,096.2 ±158.0	610.9 ±17.1	595.3 --	481.8 ±27.2	522.6 --	2,074.6 --	**37,740.5**
2002	3,776.2 ±197.3	645.7 ±95.8	2,807.3 ±200.6	22,005.1 ±379.0	866.9 ±120.6	3,590.4 ±199.9	626.5 ±20.1	310.0 --	516.1 ±28.2	523.4 --	2,072.9 --	**37,740.5**
2007	3,545.9 ±252.4	628.2 ±131.1	2,825.8 ±227.6	21,916.7 ±373.6	922.7 ±134.2	3,891.7 ±212.2	634.5 ±23.2	231.0 --	535.4 ±31.4	526.8 --	2,081.8 --	**37,740.5**
2012	3,581.2 ±271.5	606.9 ±134.4	2,750.7 ±235.2	21,807.6 ±410.2	982.5 ±132.2	3,992.6 ±219.8	639.0 ±25.2	218.8 --	550.4 ±31.5	526.8 --	2,084.0 --	**37,740.5**

(Data usage notes can be found on the first page of the appendix.)

Table 2: Changes among broad cover/use categories, water, and federal land between 1982 and 2012. Estimates and margins of error in thousands of acres.

1982 Broad Cover/ Use & Surface Area Categories	2012 Broad Cover/ Use & Surface Area Categories											
	Cultivated Cropland	Non-Cultivated Cropland	Pasture[1]	Forest[1]	Other Rural Land	Urban Built-up	Rural Transport	Small Water	Large Water[3]	Federal Land[3]	CRP Land	**Total 1982**
Cultivated Cropland	3,059.9 ±228.9	246.0 ±102.4	709.4 ±104.9	1,605.8 ±143.9	77.9 ±25.6	250.2 ±41.0	20.3 ±4.9	35.4 ±8.5	0.3 --	0.9 --	157.4 ±19.8	**6,163.5 ±208.8**
Non-cultivated Cropland	37.6 ±23.6	194.7 ±55.4	75.1 ±26.0	48.9 ±22.5	*9.8[4]* *±14.8*	52.3 ±18.4	*0.9[4]* *±0.9*	3.8 ±2.3	0.0 --	0.0 --	*6.2[4]* *±6.8*	**429.3 ±72.7**
Pasture[1]	202.8 ±77.6	91.3 ±69.1	1,533.9 ±171.7	682.7 ±93.7	47.3 ±22.2	315.5 ±52.3	10.1 ±6.6	16.2 ±4.4	0.6 --	1.0 --	35.7 ±16.9	**2,937.1 ±174.2**
Forest[1]	246.8 ±93.5	70.4 ±32.2	375.8 ±80.3	19,302.5 ±449.9	177.9 ±32.6	1,633.2 ±122.0	85.6 ±11.8	102.2 ±15.9	6.9 --	44.2 --	18.3 ±6.3	**22,063.8 ±374.4**
Other Rural Land	29.0 ±25.4	*3.3[4]* *±5.4*	47.2 ±20.9	116.1 ±20.9	668.1 ±118.0	53.5 ±9.5	*0.1[4]* *±0.3*	*1.1[4]* *±1.1*	4.3 --	0.0 --	*1.2[4]* *±2.0*	**923.9 ±116.5**
Urban Built-up	*0.5[4]* *±0.8*	0.0	*1.3[4]* *±1.6*	4.1 ±2.4	0.0	1,652.1 ±122.2	0.0 --	0.0 --	0.0 --	0.3 --	0.0 --	**1,658.3 ±121.8**
Rural Transport	*1.1[4]* *±1.3*	*0.2[4]* *±0.5*	2.9 ±2.2	17.2 ±4.9	*1.4[4]* *±2.1*	35.1 ±5.1	522.0 ±16.5	0.0 --	0.0 --	0.0 --	0.0 --	**579.9 ±16.1**
Small Water	3.5 ±2.1	*0.9[4]* *±1.3*	4.3 ±3.6	16.4 ±5.1	*0.1[4]* *±0.4*	*0.7[4]* *±0.8*	0.0	391.7 ±22.0	0.0 --	0.0 --	0.0 --	**417.6 ±23.1**
Large Water[3]	0.0 --	0.0 --	0.0 --	3.4 --	0.0 --	0.0 --	0.0 --	0.0 --	514.7 --	0.0 --	0.0 --	**518.1**
Federal Land[3]	0.0 --	0.1 --	0.8 --	10.5 --	0.0 --	0.0 --	0.0 --	0.0 --	0.0 --	2,037.6 --	0.0 --	**2,049.0 --**
CRP Land[5]	0.0 --	0.0 --	0.0 --	0.0 --	0.0 --	0.0 --	0.0 --	0.0 --	0.0 --	0.0 --	0.0 --	**0.0 --**
Total 2012	**3,581.2 ±271.5**	**606.9 ±134.4**	**2,750.7 ±235.2**	**21,807.6 ±410.2**	**982.5 ±132.2**	**3,992.6 ±219.8**	**639.0 ±25.2**	**550.4 ±31.5**	**526.8 --**	**2,084.0 --**	**218.8[3] --**	**37,740.5 --**

(Data usage notes can be found on the first page of the appendix.)

Table 3: Broad cover/use by MLRA in 1982 and 2012. Estimates and margins of error in thousands of acres.

MLRA	MLRA Name	Year	Cropland	CRP[3,5]	Pasture[1]	Forest[1]	Other Rural Land	Developed Land	Water Areas[3]	Federal Land[3]	Total Surface Area
128	Southern Appalachian Ridges and Valleys	1982	161.2 ±43.1	0.0[5] --	314.9 ±40.4	1,052.4 ±90.6	28.9 ±10.1	157.3 ±32.6	21.8 --	70.2 --	1,806.7 --
128	Southern Appalachian Ridges and Valleys	2012	104.5 ±76.9	0.0 --	301.8 ±76.3	923.6 ±0.0	38.1 ±16.7	341.1 ±49.7	25.2 --	72.4 --	1,806.7 --
129	Sand Mountain	1982	*0.8[4] ±1.6*	0.0[5] --	9.7 ±9.5	126.3 ±39.1	*2.1[4] ±5.0*	*7.5[4] ±9.0*	0.7 --	0.0 --	147.1 --
129	Sand Mountain	2012	*0.2[4] ±1.6*	0.0 --	*9.6[4] ±16.2*	*119.8[4] ±120.1*	*2.2[4] ±13.9*	14.2 ±11.5	1.1 --	0.0 --	147.1 --
130B	Southern Blue Ridge	1982	26.0 ±14.6	0.0[5] --	66.6 ±28.6	862.9 ±89.4	11.8 ±5.1	47.8 ±11.0	31.9 --	642.9 --	1,689.9 --
130B	Southern Blue Ridge	2012	10.8 ±9.6	0.0 --	76.5 ±21.5	753.2 ±250.9	10.8 ±3.2	157.4 ±45.9	32.5 --	648.7 --	1,689.9 --
133A	Southern Coastal Plain	1982	5,009.0 ±177.3	0.0[5] --	912.0 ±131.3	7,391.6 ±248.7	182.1 ±34.4	508.8 ±68.4	252.5 --	126.9 --	14,382.9 --
133A	Southern Coastal Plain	2012	3,342.3 ±268.6	190.4 --	927.1 ±156.5	8,323.4 ±485.2	226.1 ±40.4	916.7 ±106.5	329.9 --	127.0 --	14,382.9 --
136	Southern Piedmont	1982	599.5 ±77.5	0.0[5] --	1,460.0 ±134.7	6,952.9 ±178.1	174.3 ±43.5	1,130.0 ±79.2	329.8 --	322.9 --	10,969.4 --
136	Southern Piedmont	2012	216.6 ±71.2	24.2 --	1,175.5 ±198.4	6,201.0 ±481.0	168.7 ±39.1	2,489.1 ±119.0	365.6 --	328.7 --	10,969.4 --
137	Carolina and Georgia Sand Hills	1982	261.9 ±41.2	0.0[5] --	93.8 ±32.3	1,310.9 ±115.8	33.2 ±13.9	137.5 ±27.6	24.6 --	148.2 --	2,010.1 --
137	Carolina and Georgia Sand Hills	2012	109.6 ±45.3	0.0 --	118.3 ±40.6	1,332.1 ±191.9	23.6 ±19.9	246.3 ±36.6	29.8 --	150.4 --	2,010.1 --
153A	Atlantic Coast Flatwoods	1982	534.2 ±68.5	0.0[5] --	79.9 ±31.5	4,080.2 ±216.7	33.4 ±9.4	166.4 ±30.2	52.7 --	686.7 --	5,633.5 --
153A	Atlantic Coast Flatwoods	2012	404.1 ±109.2	4.2 --	139.6 ±56.5	3,932.8 ±356.8	57.8 ±23.6	342.3 ±61.9	65.1 --	687.6 --	5,633.5 --
153B	Tidewater Area	1982	*0.2[4] ±0.7*	0.0[5] --	*0.2[4] ±0.2*	286.6 ±86.0	458.1 ±101.2	82.9 ±34.3	221.7 --	51.2 --	1,100.9 --
153B	Tidewater Area	2012	0.0 --	0.0 --	*2.3[4] ±4.5*	221.7 ±107.7	455.2 ±117.5	124.5 ±45.1	228.0 --	69.2 --	1,100.9 --

(Data usage notes can be found on the first page of the appendix.)

Table 4: Specific land cover/use on cropland and pasture by year. Estimates and margins of error in thousands of acres.

Land Cover/Use Cultivated Cropland	1982	1987	1992	1997	2002	2007	2012
Horticulture Crops	*11.2[4]* *±14.5*	*2.2[4]* *±3.3*	0.0	0.0	0.0	0.0	0.0
Corn	1,541.8 ±115.8	1,362.3 ±108.8	945.2 ±110.4	548.5 ±76.2	406.4 ±110.3	511.2 ±122.3	385.5 ±73.4
Sorghum	179.6 ±51.0	105.9 ±35.6	72.5 ±23.4	33.0 ±16.7	16.5 ±12.9	*15.9[4]* *±20.2*	26.9 ±6.3
Soybeans	2,367.8 ±168.9	1,685.5 ±126.3	1,166.6 ±165.8	479.2 ±60.8	109.0 ±76.4	304.8 ±135.0	155.7 ±71.1
Cotton	240.8 ±57.9	350.0 ±73.4	509.7 ±66.0	1,618.7 ±126.6	1,761.8 ±177.8	1,376.1 ±168.2	1,751.0 ±222.8
Peanuts	557.2 ±83.1	658.1 ±77.2	789.4 ±90.5	585.8 ±70.7	556.8 ±93.0	673.0 ±129.7	688.7 ±101.4
Tobacco	73.4 ±29.1	62.8 ±25.1	63.2 ±24.4	63.8 ±27.1	23.2 ±21.8	17.2 ±10.3	5.9 ±3.5
Potatoes	*2.8[4]* *±4.1*	*5.2[4]* *±5.5*	*2.9[4]* *±3.4*	*0.7[4]* *±1.5*	0.0	0.0	0.0
Other Vegetable	64.4 ±27.3	59.6 ±25.2	125.4 ±37.3	110.7 ±31.1	71.1 ±44.4	101.2 ±44.0	116.0 ±39.5
All Other Row Crops	14.6 ±13.1	*8.1[4]* *±9.2*	*4.3[4]* *±7.4*	*1.4[4]* *±3.1*	11.5 ±10.1	*14.7[4]* *±16.6*	*15.0[4]* *±19.5*
Sunflowers	*0.5[4]* *±1.1*	0.0	0.0	*1.7[4]* *±7.7*	*8.7[4]* *±8.8*	*5.1[4]* *±10.4*	*2.6[4]* *±5.2*
Wheat	578.8 ±113.6	361.5 ±51.7	201.1 ±49.2	193.7 ±49.1	126.4 ±48.3	167.2 ±81.7	208.5 ±88.9
Oats	*17.7[4]* *±61.4*	14.8 ±13.7	8.8 ±7.6	10.8 ±9.9	*57.0[4]* *±64.3*	*3.0[4]* *±4.1*	*7.8[4]* *±8.9*
Barley	*2.3[4]* *±6.0*	*2.3[4]* *±6.0*	*4.1[4]* *±5.7*	*1.1[4]* *±2.5*	0.0	0.0	*1.2[4]* *±4.0*
Other Close-Grown	131.7 ±36.9	111.2 ±28.3	50.4 ±19.9	68.8 ±25.1	103.2 ±66.0	73.7 ±47.2	35.6 ±25.1
Summer Fallow	*9.3[4]* *±11.1*	15.9 ±13.4	*12.7[4]* *±19.3*	*7.2[4]* *±7.4*	47.3 ±31.0	108.8 ±46.3	38.0 ±23.1

(Continued next page)

Table 4 (cont.)

Other-Not Planted	281.0 ±58.6	562.6 ±74.8	682.5 ±85.3	419.5 ±71.3	313.4 ±80.4	94.4 ±43.8	105.1 ±38.8
Pastureland	59.1 ±20.8	*58.3[4] ±60.7*	54.0 ±19.6	24.1 ±13.3	131.3 ±38.4	31.8 ±15.7	25.1 ±23.1
Total Cultivated Cropland	**6,163.5 ±208.8**	**5,487.9 ±208.3**	**4,730.0 ±264.3**	**4,176.2 ±186.0**	**3,776.2 ±197.3**	**3,545.9 ±252.4**	**3,581.2 ±271.5**
Land Cover/Use Non-Cultivated Cropland	1982	1987	1992	1997	2002	2007	2012
Fruit - Orchards	23.6 ±12.5	*8.6[4] ±8.7*	17.0 ±10.9	17.4 ±10.2	*17.1[4] ±19.2*	15.0 ±7.3	12.4 ±1.0
Nuts	199.3 ±55.0	221.3 ±59.7	220.9 ±51.5	236.4 ±56.2	218.7 ±58.8	213.9 ±69.7	217.1 ±70.2
Vineyard	*0.5[4] ±1.2*	*1.5[4] ±2.6*	*2.3[4] ±4.7*	0.0	*1.6[4] ±1.6*	0.0	0.0
Bush Fruit	0.0	0.0	*6.6[4] ±8.3*	14.6 ±11.1	*6.1[4] ±7.7*	*1.9[4] ±5.7*	*9.7[4] ±13.9*
Berries	*3.8[4] ±5.2*	*3.8[4] ±5.2*	6.2 5.9	0.0	*1.6[4] ±11.4*	*5.0 ±12.2*	0.0
Horticulture Crops	*1.5[4] ±2.5*	*1.7[4] ±3.4*	*1.6[4] ±3.4*	*1.0[4] ±2.3*	*6.1[4] ±11.2*	*9.6[4] ±20.6*	*12.4[4] ±20.9*
Hayland	200.6 ±46.8	213.6 ±48.5	216.6 ±43.6	312.9 ±48.8	394.5 ±109.8	382.8 ±125.9	355.3 ±131.0
Total Non-cultivated Cropland	**429.3 ±72.7**	**450.5 ±72.8**	**471.2 ±66.5**	**582.3 ±63.4**	**645.7 ±95.8**	**628.2 ±131.1**	**606.9 ±134.4**
Land Cover/Use Pasture	1982	1987	1992	1997	2002	2007	2012
Pasture	2,937.1 ±174.2	2,929.6 ±154.9	3,039.2 ±167.5	2,891.5 ±167.1	2,807.3 ±200.6	2,825.8 ±227.6	2,750.7 ±235.2

(Data usage notes can be found on the first page of the appendix.)

Table 5: Prime farmland by broad cover/use and by year. Estimates and margins of error in thousands of acres.

Year	Cultivated Cropland	Non-cultivated Cropland	Pasture	Forest	Other Rural Land	CRP Land on Prime	Total
1982	3,613.2 ±190.5	238.5 ±44.1	936.4 ±79.9	2,650.5 ±139.0	125.1 ±16.7	[5]	7,563.7 ±228.8
1987	3,279.8 ±182.1	239.9 ±47.3	974.9 ±83.5	2,724.4 ±154.4	109.4 ±13.6	174.0 ±38.7	7,502.4 ±227.6
1992	2,856.1 ±177.7	252.1 ±43.6	1,063.3 ±75.2	2,758.8 ±142.1	108.2 ±14.8	365.8 ±61.6	7,404.3 ±226.6
1997	2,561.6 ±118.5	287.3 ±40.4	1,000.6 ±86.4	2,897.5 ±142.2	107.9 ±15.8	390.8 ±79.7	7,245.7 ±232.1
2002	2,339.1 ±143.3	340.8 ±66.2	967.6 ±113.7	3,174.6 ±239.2	117.4 ±18.7	186.7 ±77.8	7,126.2 ±243.6
2007	2,192.8 ±164.6	343.9 ±91.3	971.7 ±120.0	3,279.2 ±258.3	133.9 ±25.7	130.3 ±65.7	7,051.8 ±247.5
2012	2,175.1 ±178.6	346.7 ±95.9	957.1 ±123.2	3,271.9 ±283.9	139.1 ±24.1	127.1 ±59.3	7,017.0 ±252.1

(Data usage notes can be found on the first page of the appendix.)

Table 6: Average annual sheet and rill erosion by broad cover/use and by year. Estimates and margins of error in tons/acre/year.

Year	Cultivated Cropland	Non-cultivated Cropland	Pasture	CRP Land
1982	5.649 ±0.184	0.347 ±0.109	0.455 ±0.067	[5]
1987	5.417 ±0.196	0.840 ±0.366	0.363 ±0.035	4.394 ±1.831
1992	4.836 ±0.251	0.454 ±0.174	0.340 ±0.036	0.717 ±0.428
1997	5.119 ±0.232	0.213 ±0.055	0.339 ±0.036	0.261 ±0.215
2002	5.090 ±0.311	0.451 ±0.074	0.568 ±0.092	*0.489 ±0.550*
2007	5.122 ±0.374	0.416 ±0.116	0.671 ±0.104	0.358 ±0.271
2012	5.707 ±0.476	0.489 ±0.134	0.753 ±0.104	0.442 ±0.303

(Data usage notes can be found on the first page of the appendix.)

Table 7: Conservation Reserve Program (CRP) contracted practices by year. Estimates and margins of error in thousands of acres.

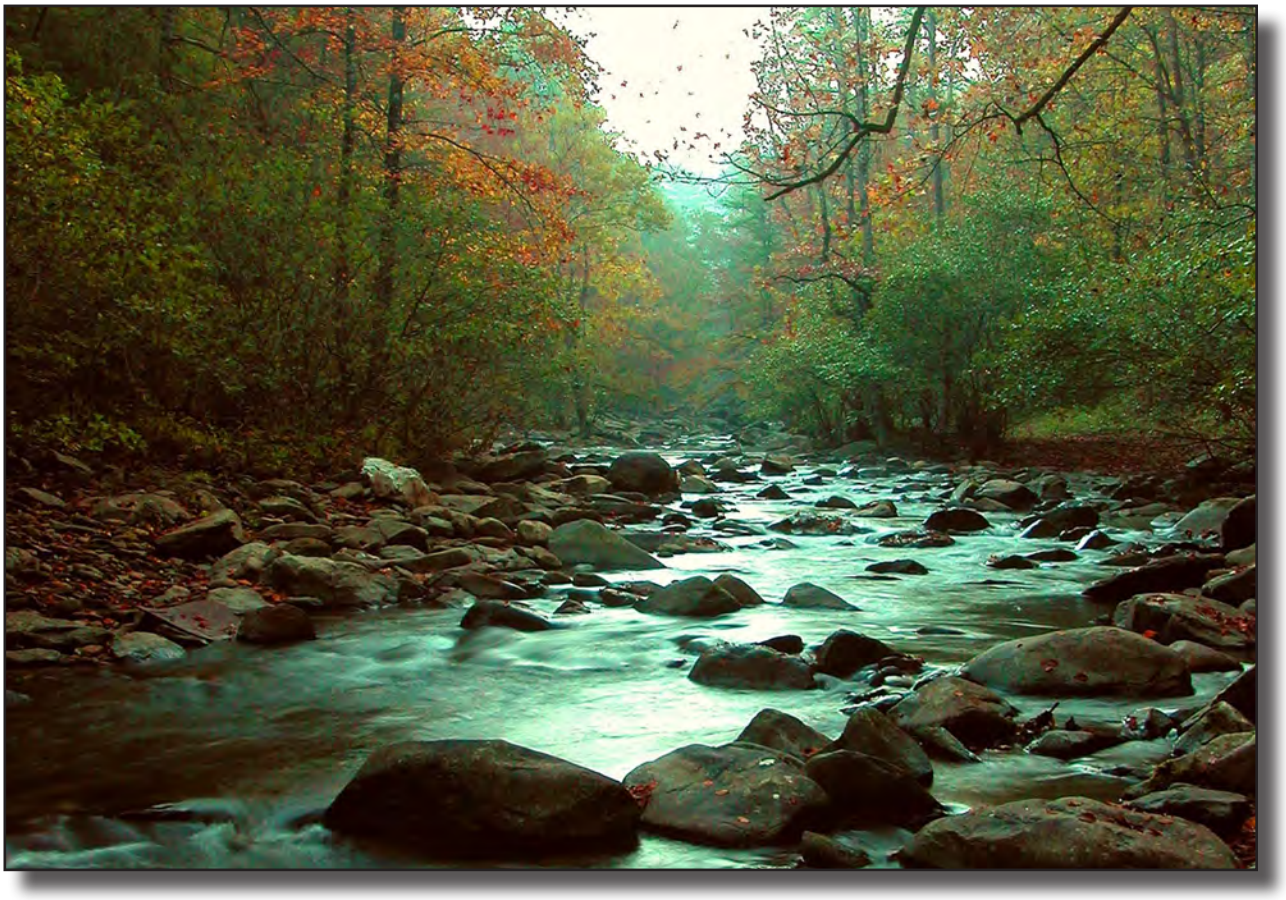
Year[6]	Grasses & Legumes	Trees	Wildlife & Components	Shallow Water Cover	Native Grasses	Total[3]
1992	36.3 ±26.0	486.7 ±52.5	70.7 ±29.9	0.0	0.0	593.7
1997	27.2 ±26.7	529.5 ±33.6	38.6 ±25.7	0.0	0.0	595.3
2002	*15.8[4] ±18.8*	287.0 ±37.7	*7.2[4] ±12.0*	0.0	0.0	310.0
2007	*7.3[4] ±9.6*	219.1 ±38.6	0.0	0.0	*4.6[4] ±14.5*	231.0
2012	*4.9[4] ±6.8*	209.3 ±16.8	0.0	0.0	*4.6[4] ±14.5*	218.8

(Data usage notes can be found on the first page of the appendix.)

Table 8: Cowardin Wetland and Deepwater Habitat Systems and Classes. Estimates and margins of error in thousands of acres.

Cowardin Wetland and Deepwater Habitat System		Area
Class	Estuarine-None/Other Vegetation	186.2[3]
	Estuarine-Emergent Vegetation	445.7 ±114.4
	Estuarine-Scrub-Shrub Vegetation	0.0
	Estuarine-Forested Vegetation	0.0
Total Estuarine System		**631.9** ±114.4
Class	Riverine-None/Other	190.3 ±18.8
	Riverine-Emergent Nonpersistent Vegetation	*0.2 ±0.4*
Total Riverine System		**190.5** ±18.7
Class	Lacustrine-None/Other	555.5 ±26.6
	Lacustrine-Emergent Nonpersistent Vegetation	0.3
Total Lacustrine System		**555.8** ±26.6
Class	Palustrine-None/Other	248.3 ±55.3
	Palustrine-Emergent Vegetation	184.7 ±60.0
	Palustrine-Scrub-Shrub Vegetation	30.3 ±23.2
	Palustrine-Forested Vegetation	5,607.0 ±228.6
Total Palustrine System		**6,070.3** ±210.5
Cowardin System Total		**7,448.5** ±182.0

(Data usage notes can be found on the first page of the appendix.)



A forested creek in the Southern Appalachian Ridges and Valleys providing fresh water, clean air, wildlife habitat, and recreation.

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