



Steve Troxler
Commissioner

North Carolina Department of Agriculture
and Consumer Services
Division of Soil and Water Conservation

Patricia K. Harris
Director

Memorandum

TO: Environmental Review Commission and Fiscal Research Division

FROM: Patricia K. Harris, Director *by DSW*

Date: January 31, 2014

RE: 2013 Annual Report on the Community Conservation Assistance Program

This memo transmits the 2013 Annual Report on the Community Conservation Assistance Program. General Statute 106-860(e) requires the Soil and Water Conservation Commission to submit annual reports on the Community Conservation Assistance Program no later than January 31 of each year, to the Environmental Review Commission and the Fiscal Research Division.

If you have any questions or need additional information, please contact me at (919) 715-6097 or by email at pat.harris@ncagr.gov.

Enclosure

cc: Commissioner Steve Troxler
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**Report to the Environmental Review Commission
and Fiscal Research Division of the N.C. General Assembly
on the Community Conservation Assistance Program**



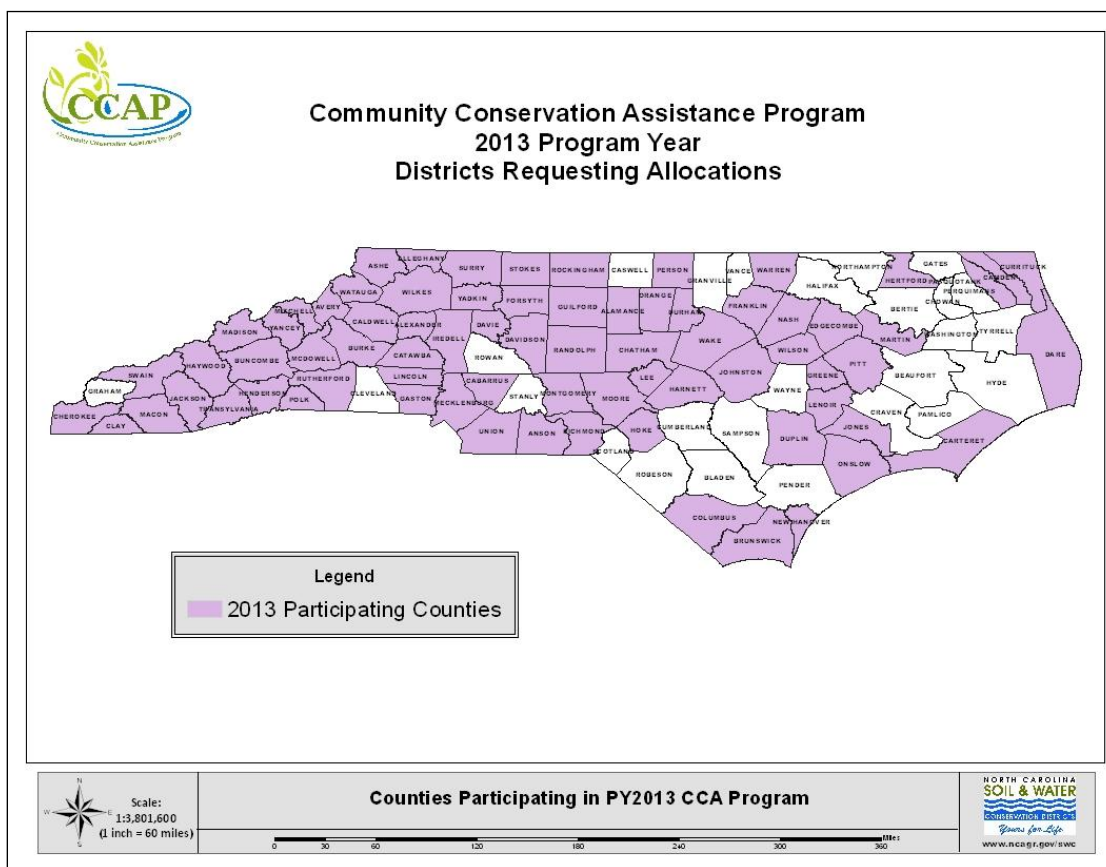
**FISCAL YEAR 2013 ANNUAL REPORT
January 2014**

General Statute 143-215.74M(e) of Session Law 2006-78 mandates that the Soil and Water Conservation Commission report to the Environmental Review Commission and the Fiscal Research Division a summary of the Community Conservation Assistance Program (herein referred to as CCAP) annually. The purpose of CCAP is to reduce the delivery of nonpoint source (NPS) pollution into the waters of the State by installing best management practices (BMPs) on developed lands, not directly involved in agricultural production. Through this voluntary, incentive-based conservation program, landowners are provided educational, technical and financial assistance.

Eligible landowners, including homeowners, businesses, schools, parks, churches, and others, may be reimbursed up to 75 percent of the cost of retrofitting BMPs. Soil and Water Conservation Districts (districts) provide educational services to local governments and the public and direct technical and financial assistance to property owners. The Soil and Water Conservation Commission administers the program through the Division of Soil and Water Conservation. CCAP BMPs include: abandoned well closures, backyard rain gardens, backyard wetlands, bioretention areas, cisterns, critical area plantings, diversions, grassed swales, impervious surface conversions, marsh sills, permeable pavement, pet waste receptacles, riparian buffers, stormwater wetlands, stream restoration, stream and shoreline protection, and structural stormwater conveyance. During PY2013, the CCAP Advisory Committee utilized the technical skills of its members to develop additional design tools and maintenance plans for various BMPs. More information regarding CCAP BMPs can be found in Appendix A, the Detailed Implementation Plan.

During Fiscal Year (FY) 2013 the Division of Soil and Water Conservation received recurring appropriated funds for CCAP in the amount of \$193,097. A portion of these funds support a full-time permanent employee to coordinate the program and administer the funds for program implementation. To maintain technical assistance positions in two active CCAP counties, a portion of these funds was used to provide technical assistance cost share funding in the amount of \$23,958. The remainder of the state appropriations was allocated to local districts for BMP installation. At their August 23, 2012 meeting, the Soil and Water Conservation Commission allocated \$180,554 to be distributed to interested districts according to the parameters outlined in 02 NCAC 59H .0103. The districts that received an allocation of CCAP state funds in FY2013 are displayed in Figure 1 below.

Figure 1: Soil and Water Conservation Districts Receiving CCAP State Appropriated Funds in FY2013



In addition to the State appropriation, unencumbered BMP implementation grant funds were allocated to participating districts. The funding sources for these grants include the NC Environmental Enhancement Grant Program and the Clean Water Management Trust Funds. These funds, in combination with the recurring state appropriation, allowed this program to address water quality concerns and reach citizens across the state.

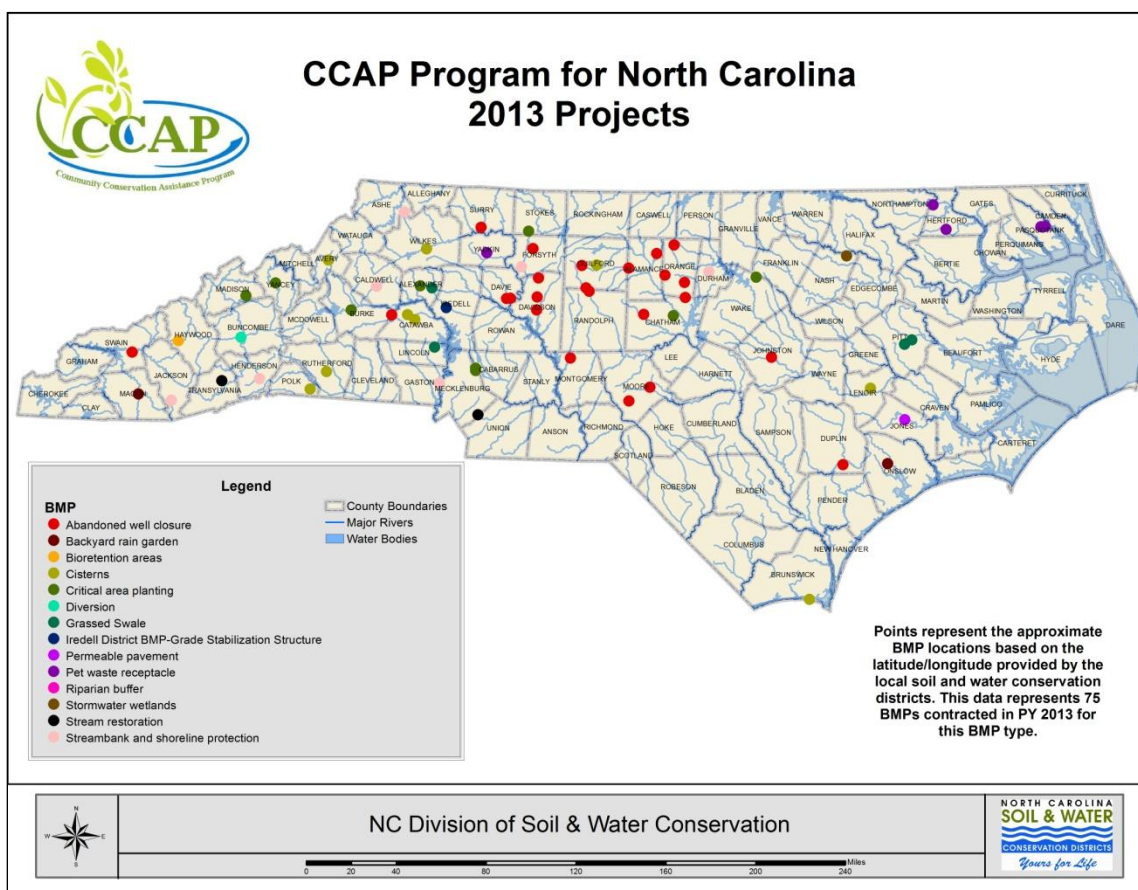
Significant advancements in program development and project installations were seen during this sixth program year.

Program highlights and accomplishments in FY2013 include the following:

- The CCAP Advisory Committee met twice during FY2013 to provide oversight and technical review of the program. This group was active in the following areas:
 - Reviewing and recommending to the Commission Job Approval Authority to Registered Landscape Architects (RLAs) for the following practices: raingardens, backyard wetlands, and cisterns.
 - Updating the Average Cost List for BMP cost share and making the recommendation to the Commission for adoption
 - Development of the Operations and Maintenance agreement for the Critical Area Planting standard
 - Updating the Detailed Implementation Plan for PY2013
 - Presentations by partnership organizations on the Urban Forestry grant program and Low Impact Development (LID) methods

- The membership of the CCAP Advisory Committee, as described in § 106-860, is shown in Appendix B.
- The CCAP Design Manual was updated, 35 copies printed, and made available at: <http://www.ncagr.gov/SWC/costshareprograms/CCAP/ccapdesignmanual.html>.
- 74 project contracts were submitted to encumber \$180,554 as depicted in Figure 2.
- The job approval authority process continued to be improved and implemented to ensure district employees are certified to design and approve installation of CCAP BMPs. To date, 49 district employees have CCAP job approval authority for select conservation practices.

Figure 2: Soil and Water Conservation Districts Receiving CCAP State Appropriated Funds in FY2013



BMPs installed in FY2013 from all funding sources are included in the chart below:

Best Practice	Planned	
	Unit	Quantity
Abandoned well closure	Each	36
Backyard rain garden	Job	1
Bioretention areas	Square Feet	1,000
Cisterns	Gallons	22,507
Critical area planting	Square Feet	19,602
Permeable pavement	Square Feet	1,223
Pet waste receptacle	Each	12
Riparian buffer	Square Feet	582
Stormwater wetlands	Square Feet	14,841
Stream restoration	Feet	275
Streambank and shoreline protection	Feet	2,773

The N.C. Community Conservation Assistance Program is securing a future for Soil and Water Conservation Districts as North Carolina's landscape, community and pollutant sources change. Demand for the program from districts across the state continues to exceed the current funding. During FY2013, over \$2.17 million was requested from the 74 participating districts.

Many existing water quality initiatives are geared towards new construction, such as Low Impact Development, the State's Erosion and Sediment Control statute, and design standards. CCAP is unique, in that it is a retrofit only program. The results illustrate the important accomplishment of the General Assembly in creating the only state-wide program that addresses non-point water pollution sources from already developed areas. In addition, CCAP will be a cost effective mechanism for implementing the Falls Lake and Jordan Lake Existing Development Rules.

Future program recommendations include:

- Increasing program funding to accommodate the existing project needs
- Increasing technical assistance funding to support district staff
- Increasing funding to provide additional engineering support
- Provide a recommendation to the Commission on the existing method of allocating funds to the local districts
- Continue the pilot program of new training and testing for BMP design and installation for employees' to obtain job approval authority
- Expanding the water quality benefits tool to measure the impact of all BMPs in reducing stormwater conveyed pollutants
- Expanding outreach efforts and distribution of materials statewide
- Expanding efforts by the CCAP Advisory Committee to increase program recognition and support through partnership opportunities

For more information on the CCAP, please refer to the appendices:

- Appendix A: CCAP PY2013 Detailed Implementation Plan
- Appendix B: CCAP Advisory Committee members for 2013 Program Year
- Appendix C: Photographs of selected projects
- Appendix D: List of 2013 Contracts

APPENDIX A
COMMUNITY CONSERVATION ASSISTANCE PROGRAM
DETAILED IMPLEMENTATION PLAN
PY2013



All practices defined below are to be maintained by the landowner of a single-family residence for a five-year period; all other types of properties are to be maintained by the landowner for a 10-year period.

Definition of Practices

- (1) Abandoned well closure is the sealing and permanent closure of a supply well no longer in use. This practice serves to prevent entry of contaminated surface water, animals, debris or other foreign substances into the well. It also serves to eliminate the physical hazards of an open hole to people, animals and machinery.
- (2) Bioretention area is the use of plants and soils for removal of pollutants from stormwater runoff. Bioretention can also be effective in reducing peak runoff rates, runoff volumes and recharging groundwater by infiltrating runoff. Bioretention areas are intended to treat impervious surface areas of greater than 2500 ft².
- (3) A backyard rain garden is a shallow depression in the ground that captures runoff from a driveway, roof, or lawn and allows it to soak into the ground, rather than running across roads, capturing pollutants and delivering them to a stream. Backyard rain gardens are intended to treat impervious surface areas of less than 2500 ft².
- (4) Stormwater wetland means a constructed system that mimics the functions of natural wetlands and is designed to mitigate the impacts of stormwater quality and quantity. Stormwater wetlands are intended to treat impervious surface areas of greater than 2500 ft².
- (5) Backyard wetlands are constructed systems that mimic the functions of natural wetlands. They can temporarily store, filter and clean runoff from driveways, roofs and lawns, and thereby improve water quality. The wetland should be expected to retain water or remain saturated for two to three weeks. Backyard wetlands are intended to treat impervious surface areas of less than 2500 ft².
- (6) A cistern is a system of collection and diversion practices to prevent stormwater from flowing across impervious areas, collecting sediment and reaching the storm drains. Benefits may include the reduction of stormwater runoff thereby reducing the opportunity for pollution to enter the storm drainage system.
- (7) A critical area planting means an area of highly erodible land, which cannot be stabilized by ordinary conservation treatment on which permanent perennial vegetative cover is established and protected to improve water quality. Benefits may include reduced soil erosion and sedimentation and improved surface water quality.
- (8) A diversion means a channel constructed across a slope with a supporting ridge on the lower side to control drainage by diverting excess water from an area to improve water quality.

- (9) A grassed swale consists of a natural or constructed channel that is shaped or graded to required dimensions and established in suitable vegetation for the stable conveyance of runoff to improve water quality. Benefits may include reduced soil erosion, and sedimentation and improve the quality of surface water pollution from dissolved and sediment-attached substances.
- (10) Impervious surface conversion means the removal of impenetrable materials such as asphalt, concrete, brick and stone. These materials seal surfaces, repel water and prevent precipitation from infiltrating soils. Removal of these impervious materials, when combined with permeable pavement or vegetation establishment, is intended to reduce stormwater runoff rate and volume, as well as associated pollutants transported from the site by stormwater runoff.
- (11) Permeable pavement means materials that are designed to allow water to flow through them and thus reduce the imperviousness of traffic surfaces, such as patios, walkways, sidewalks, driveways and parking areas.
- (12) A pet waste receptacle means a receptacle designed to encourage pet owners to pick up after animals in parks, neighborhoods and apartment complexes so as to prevent waste from being transported off-site by stormwater runoff.
- (13) A riparian buffer means an area adjacent to a stream where a permanent, long-lived vegetative cover (sod, shrubs, trees or a combination of vegetation types) is established to improve water quality. Benefits may include reduced soil erosion, sedimentation, pathogen contamination and pollution from dissolved, particulate and sediment-attached substances.
- (14) A stream restoration system means the use of bioengineering practices, native material revetments, channel stability structures and/or the restoration or management of riparian corridors to protect upland BMPs, restore the natural function of the stream corridor and improve water quality by reducing sedimentation to streams from streambanks.
- (15) Streambank and shoreline protection means the use of vegetation to stabilize and protect banks of streams, lakes, estuaries or excavated channels against scour and erosion.
- (16) Marsh sills protect estuarine shorelines from erosion, combining engineered structures with natural vegetation to maintain, restore, or enhance the shoreline's natural habitats. A sill is a coast-parallel, long or short structure built with the objective of reducing the wave action on the shoreline by forcing wave breaking over the sill. Sills are used to provide protection for existing coastal marshes, or to retain sandy fill between the sill and the eroding shoreline, to establish suitable elevations for the restoration or establishment of coastal marsh and/or riparian vegetation.
- (17) A structural stormwater conveyance includes various techniques to divert runoff from paved surfaces where a vegetated diversion is not feasible. The purpose is to direct stormwater runoff (sheet flow or concentrated) away from a direct discharge point and divert it to an approved BMP or naturally vegetated area capable of removing nutrients through detention, filtration, or infiltration.

Appendix B – Standing Members of the 2013 Community Conservation Assistance Program Advisory Committee

	First Name	Last Name	Agency	Email
1	Pat	Harris	Division of Soil & Water Conservation	pat.harris@ncagr.gov
2	Bill	Hart	NC Assoc. of Soil & Water Conservation	bhart1102@yahoo.com
3	Mitch	Woodward	NCSU Cooperative Extension Service	mdwoodward01@gmail.com
4	Latonia	Strickland	NC Association of County Commissioners	latonia.strickland@ncacc.org
**5	Beth	Brown	NC League of Municipalities	eabrown@townofhopemills.com
**6	Jerry	Raynor	USDA - NRCS	Jerry.Raynor@nc.usda.gov
7	Kacy	Cook	Wildlife Resources Commission	kacy.cook@ncwildlife.org
8	Mike	Doxey	NC District Employees Association	mdoxey@co.currituck.nc.us
9	Wayne	Howell	NC Association of RC&D Councils	wayne.howell@nc.nacdnet.net
**10	Bradley	Bennett	Division of Energy, Mineral and Land Resources, Stormwater Programs	bradley.bennett@ncdenr.gov
11	Alan	Moore	NC Forest Service	alan.moore@ncagr.gov
**12	Matt	Poling	Division of Energy, Mineral and Land Resources	matt.poling@ncdenr.gov
**13	Steve	Trowell	Division of Coastal Management	steve.trowell@ncdenr.gov
14	Jeff	Bruton	Division of Water Resources	jeff.bruton@ncdenr.gov
15	Brad	Barringer	Land Improvement Contractors (LICA)	brsbrad@ctc.net

** denotes a change in member representation

Appendix C – Photographs of CCAP Best Management Practices



Catawba County – cistern system at municipal building



Permeable pavement – Jones County



Before – stream stabilization project Caldwell County



After – stream stabilization project Caldwell County



Stormwater wetland – New Hanover County



Grassed swale – Wake County

Appendix D - PY 2013 CCAP Program

List of Contracts by District

County	Best Management	Cost
ALAMANCE		
01-2013-501	Abandoned well closure	\$1,500
01-2013-504	Abandoned well closure	\$1,500
ALEXANDER		
02-2013-501	Critical area planting	\$1,409
02-2013-502	Critical area planting	\$8,247
	Grassed Swale	\$713
ASHE		
05-2013-501	Streambank and shoreline	\$1,561
AVERY		
06-2013-501	Cisterns	\$2,153
BRUNSWICK		
10-2013-501	Cisterns	\$2,700
BUNCOMBE		
11-2013-501	Diversion	\$3,302
BURKE		
12-2013-005	Backyard rain garden	\$2,138
	Critical area planting	\$18
12-2013-007	Abandoned well closure	\$1,101
CABARRUS		
13-2013-501	Critical area planting	\$101
13-2013-502	Critical area planting	\$2,355
CALDWELL		
14-2013-517	Streambank and shoreline	\$3,059
CARTERET		
16-2013-601	Permeable pavement	\$1,703
CATAWBA		
18-2013-501	Cisterns	\$1,860
18-2013-502	Cisterns	\$2,055
CHATHAM		
19-2013-501	Abandoned well closure	\$1,500
19-2013-503	Critical area planting	\$1,000
CURRITUCK		
27-2013-501	Backyard rain garden	\$1,034
27-2013-502	Backyard rain garden	\$686

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County	Best Management	Cost
DAVIDSON		
29-2013-501	Abandoned well closure	\$1,320
29-2013-502	Abandoned well closure	\$1,200
29-2013-503	Abandoned well closure	\$510
DAVIE		
30-2013-501	Abandoned well closure	\$1,500
30-2013-502	Abandoned well closure	\$1,500
DUPLIN		
31-2013-002	Abandoned well closure	\$1,500
DURHAM		
32-2013-506	Streambank and shoreline	\$3,867
FORSYTH		
34-2013-501	Abandoned well closure	\$900
34-2013-502	Abandoned well closure	\$900
34-2013-505	Streambank and shoreline	\$1,430
GASTON		
36-2013-511	Streambank and shoreline	\$3,571
GUILFORD		
41-2013-501	Abandoned well closure	\$1,500
41-2013-502	Cisterns	\$1,659
41-2013-504	Abandoned well closure	\$456
HAYWOOD		
44-2013-501	Bioretention areas	\$11,250
HENDERSON		
45-2013-502	Riparian buffer	\$427
	Streambank and shoreline	\$3,000
HERTFORD		
46-2013-501	Pet waste receptacle	\$800
46-2013-502	Pet waste receptacle	\$700
IREDELL		
49-2013-010	Iredell District BMP-Grade	\$2,772
JACKSON		
50-2013-501	Streambank and shoreline	\$2,072
JOHNSTON		
51-2013-501	Abandoned well closure	\$3,000

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List of Contracts by District

County	Best Management	Cost
JONES		
52-2013-501	Permeable pavement	\$2,191
LENOIR		
54-2013-501	Cisterns	\$1,500
LINCOLN		
55-2013-504	Grassed Swale	\$3,239
MACON		
56-2013-501	Backyard rain garden	\$1,262
MADISON		
57-2013-501	Critical area planting	\$1,534
MECKLENBURG		
60-2013-002	Riparian buffer	\$1,313
	Stream restoration	\$1,639
MONTGOMERY		
62-2013-501	Abandoned well closure	\$1,500
MOORE		
63-2013-500	Abandoned well closure	\$1,400
63-2013-501	Abandoned well closure	\$1,400
NASH		
64-2013-501	Stormwater wetlands	\$26,250
ONslow		
67-2013-002	Backyard rain garden	\$2,925
ORANGE		
68-2013-501	Abandoned well closure	\$1,100
68-2013-502	Abandoned well closure	\$450
68-2013-503	Abandoned well closure	\$1,500
68-2013-504	Abandoned well closure	\$790
PASQUOTANK		
70-2013-501	Pet waste receptacle	\$1,175
70-2013-502	Pet waste receptacle	\$1,175
PITT		
74-2013-501	Grassed Swale	\$501
74-2013-502	Grassed Swale	\$1,580
POLK		
75-2013-503	Cisterns	\$1,882

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County	Best Management	Cost
RANDOLPH		
76-2013-501	Abandoned well closure	\$2,673
RUTHERFORD		
81-2013-505	Cisterns	\$2,931
STOKES		
85-2013-501	Critical area planting	\$2,426
SURRY		
86-2013-501	Abandoned well closure	\$1,500
86-2013-502	Abandoned well closure	\$1,500
SWAIN		
87-2013-503	Stormwater wetlands	\$725
87-2013-504	Abandoned well closure	\$1,500
TRANSYLVANIA		
88-2013-501	Stream restoration	\$1,624
WAKE		
92-2013-501	Cisterns	\$1,973
	Critical area planting	\$366
WILKES		
97-2013-501	Cisterns	\$2,363
YADKIN		
99-2013-006	Pet waste receptacle	\$2,049
YANCEY		
00-2013-501	Critical area planting	\$2,250