



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*
Patricia K. Harris, Director

Date: January 16, 2015

RE: 2014 Annual Report on the Community Conservation Assistance Program

This memo transmits the 2014 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

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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 2014 ANNUAL REPORT
January 2015**

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. More information regarding CCAP BMPs can be found in Appendix C, the Detailed Implementation Plan.

During Fiscal Year (FY) 2014 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. Some of these funds, totaling \$23,958, are used to maintain technical assistance positions in two active CCAP counties. The remainder of the state appropriations was allocated to local districts for BMP installation. At their August 23, 2013 meeting, the Soil and Water Conservation Commission allocated CCAP funds to 75 districts according to the parameters outlined in 02 NCAC 59H .0103. The total number and value of FY2014 CCAP contracts by county can be found in Appendix A.

In addition to the State appropriation, unencumbered BMP implementation grant funds were re-allocated to districts participating in the grant. The funding source for these grants include the NC Environmental Enhancement Grant Program and US EPA Section 319 Clean Water Act Grant Program. These funds, in combination with the recurring state appropriation, allowed this program to address water quality concerns and reach citizens across the state.

Program highlights and accomplishments in FY2014 include the following:

- The CCAP Advisory Committee met twice during FY2014 to provide oversight and technical review of the program. This group was active in the following areas:
 - Discussed future funding for the program, both from grant sources and revising the allocation parameters for the program.
 - Learned about how the Albemarle district is using riparian buffers and rock weirs in drainage canals in the eastern part of the state.
 - Updated the Detailed Implementation Plan for PY2014
 - Worked with partnership organizations to become more informed about DWR's new permeable pavement standard and Low Impact Development (LID) methods.
- 60 project contracts were submitted in FY 2014 to encumber \$104,498.
- 56 projects were implemented during FY 2014 with a total value of \$73,223

BMPs installed in FY2014 from CCAP funds, from all sources, are shown below:

Best Management Practice	Amount Installed
Abandoned well closure	13 wells
Backyard rain garden	300 square feet
Bioretention areas	230 square feet
Cisterns	4 cisterns
Critical area planting	200 square feet
Diversion	330 feet
Grassed Swale	120 feet
Pet waste receptacle	18 receptacles
Riparian buffer	274,545 square feet
Streambank and shoreline protection	3,223 feet

The water quality benefits derived from the implementation of these practices are shown below:

Benefit	Value	Units
Acres Affected	8,185.27	Acre
Gallons of Water Saved	3,000	Gallons
Nitrogen Removed	25.52	Pounds
Number of Buildings Affected	56	Each
Number of People Affected	2,395	Each
Phosphorus Removed	1.6	Pounds
Drainage Area Affected	7,819,135	Sqft
Tons of Soil Saved	573.46	Tons
Solids Removed	254	Tons

The N.C. Community Conservation Assistance Program fills a necessary gap in programs that address water quality issues in the state as North Carolina's demographics, communities, and pollutant sources change. Demand for the program from districts across the state continues to exceed the current funding. During FY2014, over \$1.6 million was requested from the 75 participating districts. This is a conservative

estimate as many districts submit lower requests than needed due to the limited amount of funds available.

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 of the program 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 helping implement the Falls Lake and Jordan Lake Existing Development Rules should additional funding for the program become available.

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.
- Providing a recommendation to the Commission on the existing method of allocating funds to the local districts.
- Continuing 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.
- Increasing outreach efforts and distribution of materials statewide.
- Reprioritizing efforts of the CCAP Advisory Committee to increase program recognition and support through partnership opportunities.
- Updating program policies and BMP design tools.

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

- Appendix A: Total number and value of FY2014 CCAP contracts by county
- Appendix B: CCAP FY2014 Contracted BMPs Map
- Appendix C: CCAP FY2014 Detailed Implementation Plan
- Appendix D: Best Management Practices (BMP) effects table
- Appendix E: CCAP Spot Check report
- Appendix F: Flow chart of funding and compliance process
- Appendix G: BMP photos

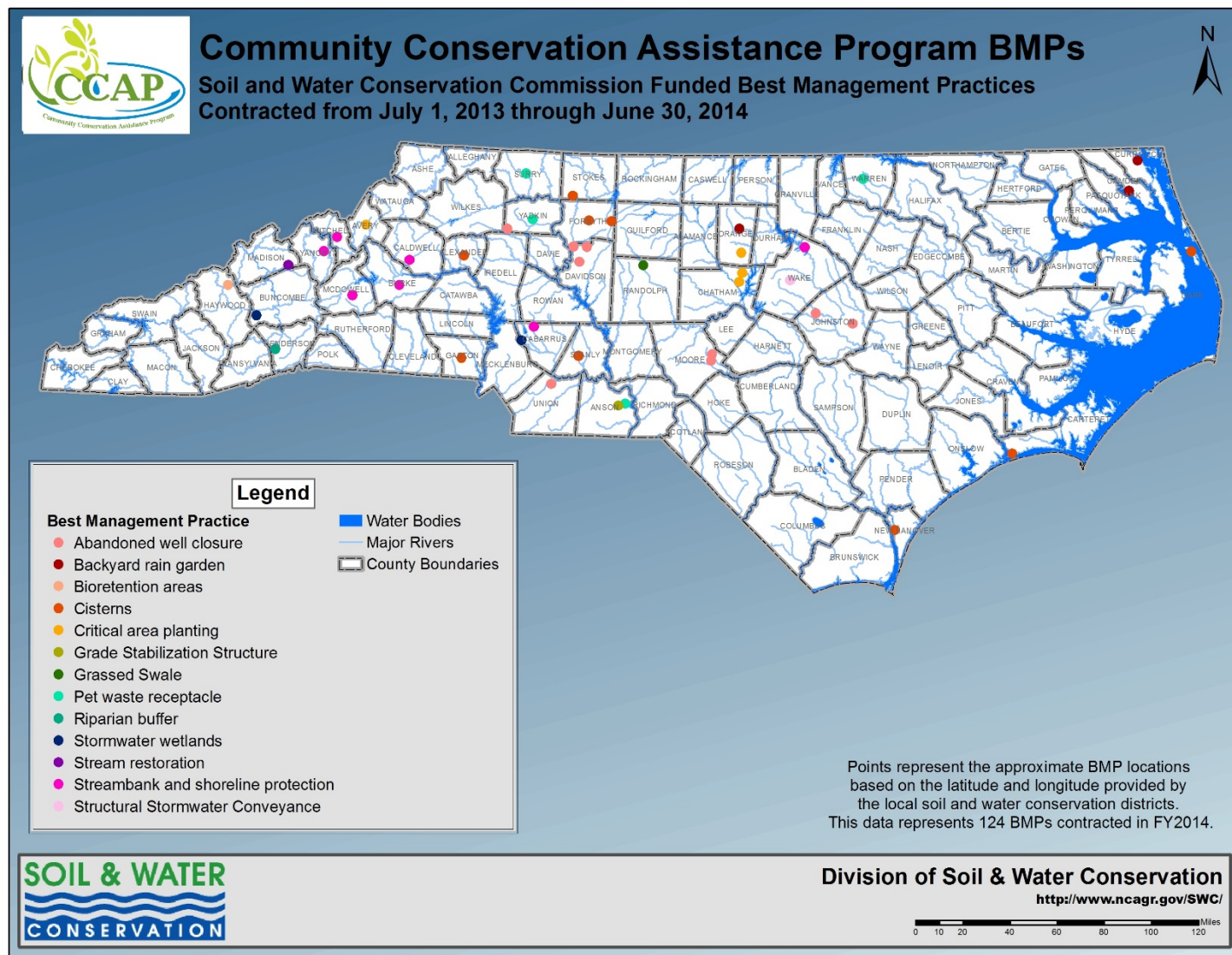
Appendix A
CCAP Participating Counties
Contracts and Total Value
2014 Fiscal Year

County	Contract Number	Best Management Practice	BMP Value
ALEXANDER	02-2014-501	Cisterns	\$2,036
ASHE	05-2014-501	Streambank and shoreline protection	\$1,855
AVERY	06-2014-501	Critical area planting	\$2,372
AVERY	06-2014-501	Pet waste receptacle	\$400
BUNCOMBE	11-2014-501	Stormwater wetlands	\$3,788
BURKE	12-2014-001	Abandoned well closure	\$99
BURKE	12-2014-005	Streambank and shoreline protection	\$2,250
CABARRUS	13-2014-502	Streambank and shoreline protection	\$2,683
CABARRUS	13-2014-503	Critical area planting	\$225
CABARRUS	13-2014-503	Stormwater wetlands	\$1,046
CALDWELL	14-2014-006	Streambank and shoreline protection	\$3,985
CAMDEN	15-2014-501	Backyard rain garden	\$1,491
CARTERET	16-2014-602	Cisterns	\$2,801
CATAWBA	18-2014-501	Abandoned well closure	\$1,286
CHATHAM	19-2014-501	Critical area planting	\$1,162
CHATHAM	19-2014-502	Critical area planting	\$159
CURRITUCK	27-2014-501	Backyard rain garden	\$450
DARE	28-2014-999	Cisterns	\$1,500
DAVIDSON	29-2014-501	Abandoned well closure	\$1,312
DAVIDSON	29-2014-502	Abandoned well closure	\$1,312
DAVIDSON	29-2014-503	Abandoned well closure	\$1,086
DURHAM	32-2014-503	Streambank and shoreline protection	\$3,131
DURHAM	32-2014-514	Streambank and shoreline protection	\$919
DURHAM	32-2014-515	Streambank and shoreline protection	\$475
FORSYTH	34-2014-503	Cisterns	\$52
FORSYTH	34-2014-504	Cisterns	\$3,555
GASTON	36-2014-512	Cisterns	\$3,542
GUILFORD	41-2014-501	Abandoned well closure	\$1,000
GUILFORD	41-2014-502	Abandoned well closure	\$1,000
GUILFORD	41-2014-503	Pet waste receptacle	\$475
GUILFORD	41-2014-504	Abandoned well closure	\$1,050
HAYWOOD	44-2014-501	Bioretention areas	\$2,925
HENDERSON	45-2014-501	Riparian buffer	\$3,943

Appendix A
CCAP Participating Counties
Contracts and Total Value
2014 Fiscal Year

County	Contract Number	Best Management Practice	BMP Value
HERTFORD	46-2014-501	Abandoned well closure	\$1,500
IREDELL	49-2014-501	Iredell District BMP-Grade Stabilization Structure	\$3,122
JOHNSTON	51-2014-501	Abandoned well closure	\$1,500
JOHNSTON	51-2014-502	Abandoned well closure	\$1,050
JONES	52-2014-501	Permeable pavement	\$691
MADISON	57-2014-519	Stream restoration	\$2,222
MCDOWELL	59-2014-005	Streambank and shoreline protection	\$2,884
MITCHELL	61-2014-501	Streambank and shoreline protection	\$2,364
MOORE	63-2014-006	Abandoned well closure	\$1,473
MOORE	63-2014-007	Abandoned well closure	\$1,473
NEW HANOVER	65-2014-501	Cisterns	\$3,211
ORANGE	68-2014-501	Critical area planting	\$2,232
ORANGE	68-2014-502	Backyard rain garden	\$924
ORANGE	68-2014-502	Critical area planting	\$1,053
RANDOLPH	76-2014-501	Grassed Swale	\$3,618
STANLY	84-2014-501	Cisterns	\$1,700
STOKES	85-2014-501	Cisterns	\$1,498
SURRY	86-2014-510	Pet waste receptacle	\$2,741
TRANSYLVANIA	88-2014-501	Bioretention areas	\$2,261
UNION	90-2014-501	Abandoned well closure	\$1,500
WAKE	92-2014-501	Backyard rain garden	\$1,248
WARREN	93-2014-501	Pet waste receptacle	\$1,500
WILKES	97-2014-501	Pet waste receptacle	\$2,527
YADKIN	99-2014-006	Abandoned well closure	\$1,500
YADKIN	99-2014-077	Pet waste receptacle	\$875
YANCEY	00-2014-501	Streambank and shoreline protection	\$2,466

Appendix B – FY2014 Contracted BMPs Map



APPENDIX C
COMMUNITY CONSERVATION ASSISTANCE PROGRAM
DETAILED IMPLEMENTATION PLAN
PY2014



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 D

CCAP BMPs Effects Table

BMP	Reduction of Nutrients	Reduction of Soil Loss	Gallons of Water Conserved	Maintenance Period of BMP*
Abandoned well closure				10
Backyard raingarden				10
Backyard wetland				10
Bioretention area	X			10
Cisterns			X	10
Critical Area Planting		X		10
Diversion		X		10
Grassed swale		X		10
Impervious surface conversion	X			10
Marsh sill				10
Permeable pavement	X			10
Pet waste receptacle				10
Riparian buffer	X			10
Stream restoration		X		10
Streambank and shoreline stabilization		X		10
Stormwater wetland	X			10
Structural stormwater conveyance		X		10

* The maintenance period for single-family home sites is five years

Appendix E
COMMUNITY CONSERVATION ASSISTANCE PROGRAM
SPOT CHECK REPORT SUMMARY PY2014

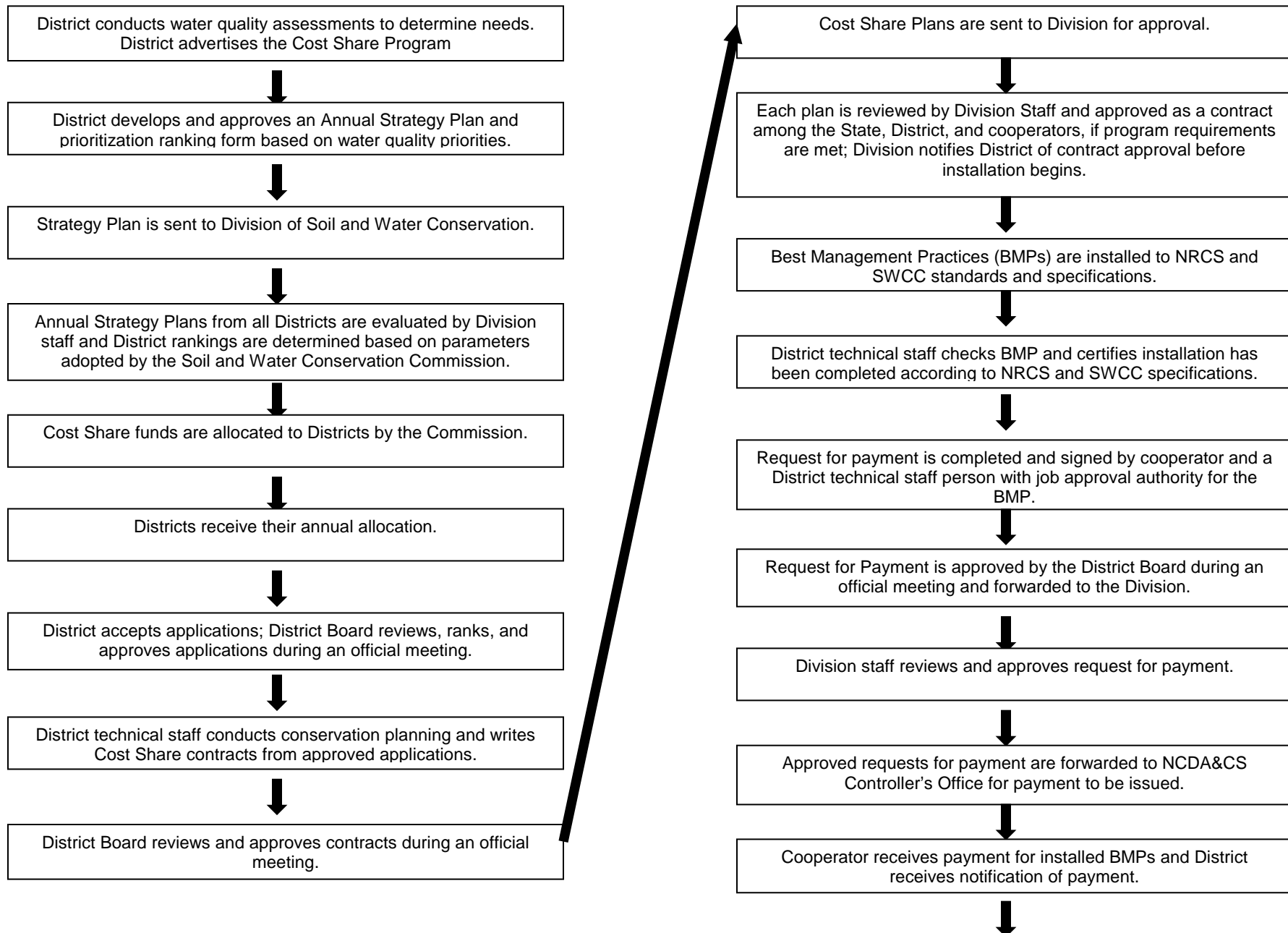
DISTRICTS	PARTICIPATING SUPERVISORS	VISITS	Total # CPOs	PERCENT VISITED	IN COMPLIANCE	OUT OF COMPLIANCE	MAINTENANCE NEEDED
ALAMANCE	4	1	1	100.0%	1	0	0
ALEXANDER	1	1	4	25.0%	1	0	0
ALLEGHANY	4	1	2	50.0%	1	0	0
ASHE							
(NEW RIVER)	4	1	4	25.0%	1	0	0
BEAUFORT	5	1	1	100.0%	1	0	0
BRUNSWICK	3	6	6	100.0%	6	0	0
BUNCOMBE	1	1	7	14.3%	1	0	0
BURKE	5	3	10	30.0%	2	1	1
CABARRUS	1	1	9	11.1%	1	0	0
CALDWELL	5	5	19	26.3%	5	0	0
CAMDEN							
(ALBEMARLE)	3	5	8	62.5%	4	0	0
CARTERET	2	5	12	41.7%	5	0	0
CATAWBA	3	1	10	10.0%	1	0	0
CHATHAM	3	1	14	7.1%	1	0	0
CLAY	4	1	2	50.0%	1	0	0
CRAVEN	1	1	2	50.0%	1	0	0
CURRITUCK							
(ALBEMARLE)	3	1	3	33.3%	1	0	0
DAVIDSON	2	1	3	33.3%	1	0	0
DUPLIN	1	1	1	100.0%	1	0	0
DURHAM	3	3	55	5.5%	3	0	1
EDGECOMBE	2	1	1	100.0%	1	0	0
FORSYTH	2	3	45	6.7%	3	0	0
GASTON	2	1	6	16.7%	1	0	0
GUILFORD	4	2	11	18.2%	2	0	0
HAYWOOD	2	1	5	20.0%	1	0	0
HENDERSON	2	2	5	40.0%	2	0	0
HERTFORD	1	4	4	100.0%	4	0	0
JACKSON	2	1	2	1.0%	1	0	0
JOHNSTON	4	1	5	1.0%	1	0	0
JONES	2	1	1	100.0%	1	0	0
LENOIR	2	2	2	100.0%	2	0	0
LINCOLN	3	1	3	33.3%	1	0	0
MACON	1	1	1	100.0%	1	0	0
MADISON	2	1	3	33.3%	1	0	0
MECKLENBURG	3	1	6	16.7%	1	0	0
MITCHELL	2	1	2	50.0%	1	0	0
MONTGOMERY	2	1	1	100.0%	1	0	0
NASH	4	1	1	100.0%	1	0	0
NEW HANOVER	2	5	20	25.0%	5	0	1
ONslow	2	1	20	5.0%	1	0	0
ORANGE	1	1	1	100.0%	1	0	0
PASQUOTANK							
(ALBEMARLE)	4	3	29	10.3%	2	1	0
PITT	2	2	4	50.0%	2	0	0
POLK	2	1	3	33.3%	1	0	0
ROCKINGHAM	2	1	5	20.0%	1	0	0
RUTHERFORD	1	1	5	20.0%	1	0	0
STANLY	2	1	1	100.0%	1	0	0
STOKES	5	1	1	100.0%	1	0	0
SURRY	4	1	1	100.0%	1	0	0
SWAIN	4	1	1	100.0%	1	0	0
TRANSYLVANIA	1	2	5	40.0%	2	0	0
WAKE	4	1	2	50.0%	1	0	0

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COMMUNITY CONSERVATION ASSISTANCE PROGRAM
SPOT CHECK REPORT SUMMARY PY2014

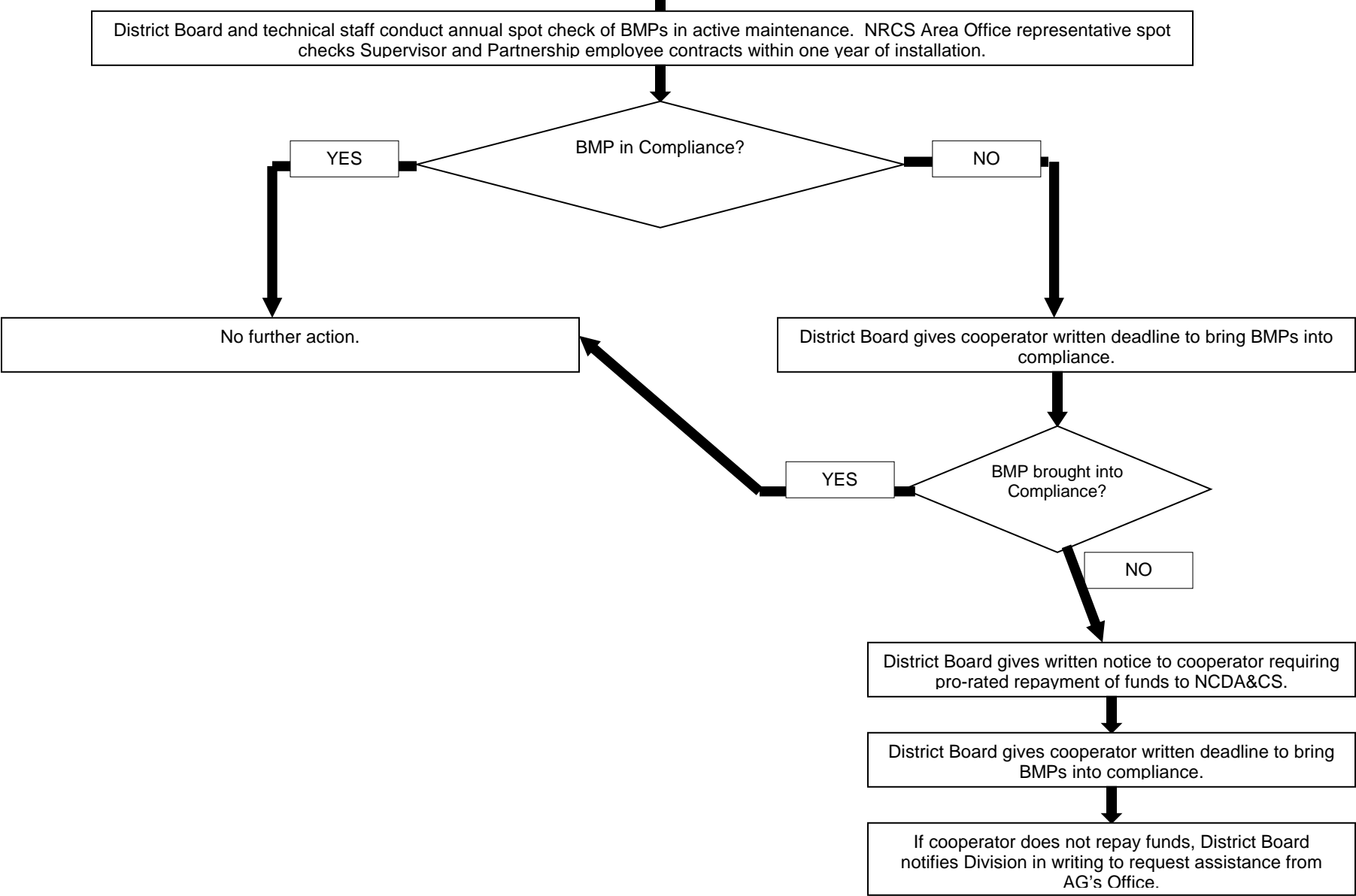
DISTRICTS	PARTICIPATING SUPERVISORS	VISITS	Total # CPOs	PERCENT VISITED	IN COMPLIANCE	OUT OF COMPLIANCE	MAINTENANCE NEEDED
WARREN	1	1	1	100.0%	1	0	0
WATAUGA	2	5	5	100.0%	5	0	0
WILKES	5	2	5	40.0%	2	0	0
WILSON	5	1	3	33.3%	1	0	0
YANCEY	1	1	4	25.0%	1	0	0
TOTALS	150	99	393	25.2%	96	2	3
					97.0%	2.0%	3.0%

Appendix F: Funding and Compliance Process

Cost Share Programs Funding and Compliance Process



Appendix F: Funding and Compliance Process



Appendix G – Best Management Practices (BMP) Photographs



Abandoned Well – closed in Orange



Stream stabilization – Haywood



Installation of cisterns – Durham



Raingarden – New Hanover



Grassed Swale, before – Pitt



Grassed Swale, after treatment, Pitt