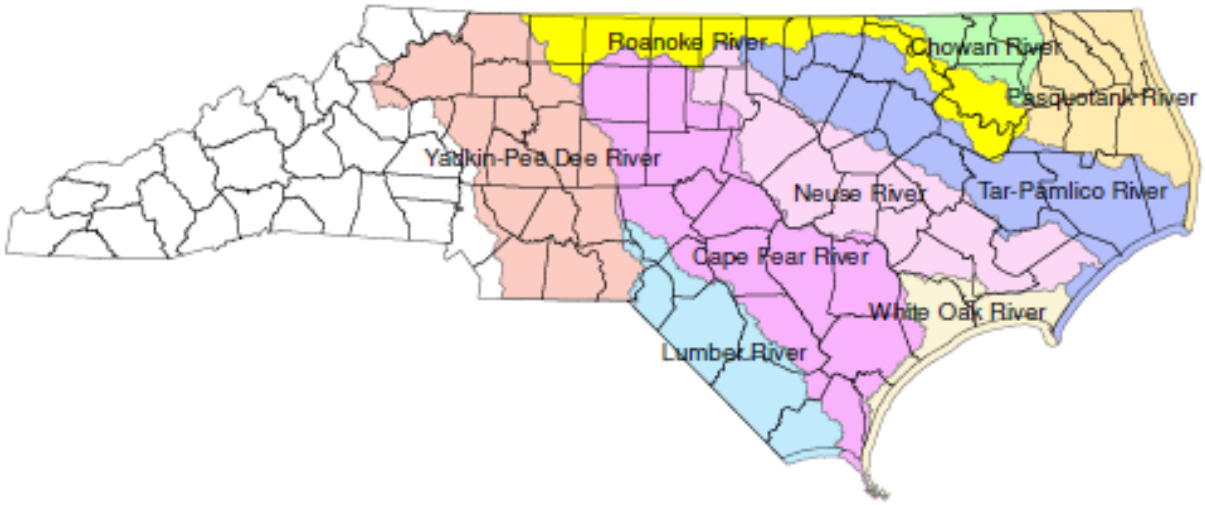
NC Conservation Reserve Enhancement Program 2019 Annual Report

(October 1, 2018 – September 30, 2019)

Submitted by the
NC Department of Agriculture and Consumer Services
Division of Soil and Water Conservation

This report covers the Federal fiscal year from October 1, 2018 through September 30, 2019 fulfilling the State of North Carolina's reporting commitment. On March 1, 1999 the initial Memorandum of Agreement established the North Carolina Conservation Reserve Enhancement Program (CREP). The goal of the program was to enroll 100,000 acres of environmentally sensitive land within the Chowan, Neuse and Tar-Pamlico river basins, as well as the Jordan Lake watershed area. Through local interest and demonstration of environmental need, North Carolina requested the program to be expanded to cover 75% of the state. On May 1, 2008, the Lumber, White Oak, Yadkin-PeeDee, Roanoke, Cape Fear and Pasquotank river basins became eligible to participate in CREP. CREP enrollment is available in 76 of the 100 counties within North Carolina. The area that qualifies for CREP is shown in Figure 1.

Figure 1: CREP River Basins



Establishment of CREP provides a voluntary incentive to encourage the enrollment of farmland and marginal pastureland into long term agreements to restore and protect riparian buffers and wetlands. Practices are designed to reduce nutrient and sediment impacts to stream courses within the targeted area and thus they have a positive impact on overall water quality.

The strong partnership between the Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS), N.C. Division of Soil and Water Conservation (DSWC), and the NC Forest Service provides an efficient mechanism for program delivery and implementation. Funding for the State's 20 percent match requirement is obtained from the N.C. Clean Water Management Trust Fund (CWMTF), state appropriations for the program, and the N.C. Agriculture Cost Share Program. North Carolina continues to explore additional partners for CREP.

CREP *Objectives*

The primary objectives of CREP are to achieve, to the extent practicable, the following:

1. Provide an opportunity for farmers in North Carolina to voluntarily establish riparian and wetland areas through financial and technical assistance.

2. Restore and enhance riparian habitat corridors next to streams, drainage ditches, estuaries, wetlands, and other water courses by enrolling up to 85,000 acres of riparian forested buffers, grass filter strips and other riparian tree plantings.

3. Restore up to 15,000 acres of non-riparian wetlands either associated with drainage ditches or adjacent to primary fishery nursery areas to address impacts associated with drainage.

4. Provide a mechanism to help farmers comply with the nutrient reduction rules in the Neuse, Tar-Pamlico, Jordan Lake, and Falls Lake watersheds, and potential regulations or goals in other watersheds.

Accomplishments

Current YEAR Enrollment

We closed 10 contracts (plus 2 modifications) on 368.56 acres, worth $313,129 of State funds during this year. New acres amounted to 240.29 and existing buffer acres were 128.27 (new to existing ratio was 1.88:1). Two (2) contracts (53.01 acres) were for a 30-year term, with the remainder in permanent easements. Four (4) projects were upgrades to permanent. State cost share payments for these projects was $110,256. CREP protected an additional 18.2 stream miles.

Cumulative CREP Enrollment

CREP tracks the acreages for 30-year and permanent, existing buffer, and total enrollment. Table 1 shows the cumulative CREP acreage that has been enrolled based on contract length. For permanent easements, our current agreement with USDA permits CREP to enroll existing buffer acres in the State portion of CREP up to a 1:1 ratio of existing buffer acres to new acres. The total cumulative CREP acreage is 30,977 acres, which includes the 1,116 existing buffer acreage.

Table 1: CREP Enrollment Acreage by Contract Length

Contract Length	Acreage
10 or 15-year Contract	2,644
30-year	18,706
Permanent	8,511
Existing Buffer Acres	1,116
Total CREP Enrollment	30,977

Longleaf Pine: CREP promotes the restoration of longleaf pine ecosystems in North Carolina through providing this tree species as an exception to the CP3A Hardwood Tree Planting Practice. To date, CREP has 111 properties (1,431 acres) in longleaf pine. This is a significant increase from previous reports because additional quality control on the database occurred. We have contributed to the establishment and long-term protection of 810 acres (60 properties) through 30-year easements and 620 acres (51 properties) through permanent easements. The Tar-Pamlico, Neuse and Lumber River Basins are the primary location of the greatest number enrollments of longleaf pine. A continued increase in CP3A Hardwood Tree Planting enrollment is expected this upcoming program year. One property was planted in longleaf pine this period, for 10 acres.

Pasture: CREP continues to see a steady increase in the enrollment of riparian buffers on pasture operations. Most of these enrollments have been in the Piedmont region of the state. Many of these farmers are willing to establish a permanent buffer along their streams to receive up to 100 percent cost sharing benefits to install fencing, watering facilities and stream crossings. Water quality benefits are substantial when considering the number of stream miles being protected through these enrollments.

Table 2 shows the distribution of CREP contracts among each eligible practice and the Federal cost share invested to install the practice. The cumulative numbers include all contracts since 1999, even if the CRP contract has expired. It is important to note that it also includes 10- and 15-year contracts that did not participate in the State Incentive Program of CREP.

Table 2: Acreage Enrollments and Federal Annual Payments by Practice

	Federal Fiscal Year 2019			
Eligible Practices	**Number of Acres For New Projects**	**Estimated Federal Annual Payments For New Projects**	**Cumulative Number of Acres in Program**	**Estimated Federal 2019 Annual Payment**
CP3 (Shortleaf Pine)	0	0	97.2	$ 17,109
CP3A (Hardwood & Longleaf Pine)	117.1	$ 13,517	3824.2	$ 616,488
CP21 (Filter Strip)	0	0	1,916.6	$ 453,788
CP22 (Riparian Buffer)	181.2	$ 18,835	26,794.9	$ 2,317,251
CP23 (Wetland Restoration)	0	0	2,171.7	$ 355,080
CP31 (Bottomland Timber)	0	0	6.3	$ 710
Total	**531.0**	**$ 10,773**	**34,714**	$ **3,760,426**

* includes 10- and 15-year contracts

Based on estimates of the environmental benefits of installed practices CREP estimates the nutrient and sediment reduction benefits in Table 3.

Table 3: Environmental Benefits

Stream Miles Protected	Sediment Reduction (tons/yr)	Nitrogen Reduction (lbs/yr)	Phosphorus Reduction (lbs/yr)
1,115 (estimated for cumulative acres)	246,817	1,935,186	441,832

The stream miles protected is calculated with the cumulative number of CREP acres enrolled, including 10-, 15- year contracts (if known), existing acres, and 30- year and permanent easements.

The nitrogen and phosphorus estimates were calculated using the North Carolina Agricultural Nutrient Assessment Tool (NCANAT). The tons of soil saved were calculated using the Revised Universal Soil Loss Equations (RUSLE). These calculations are conservative values as the tools are unable to capture the contributions of removing livestock from streams.

CREP State Incentive Enrollment

The State Incentive Program offers long-term protection for landowners by providing the opportunity to enroll environmentally-sensitive cropland or marginal pastureland in 30-year or permanent conservation easements. CREP has been implemented in North Carolina for 20 years, enrolling more than 30,977 acres in easements and protecting approximately 969.1 stream miles.

State Incentive by River Basin Enrollment

The distribution of the contracts in the river basins is shown in Table 4. The original CREP area included the Chowan, Tar-Pamlico and Neuse river basins which are identified as Nutrient Sensitive Waters. Thus, these areas have the most enrollment to date. However, CREP is gaining interest in the Cape Fear and Yadkin-PeeDee river basins. This is partly due to the continued emphasis the division and local soil and water conservation districts are placing on the financial leveraging opportunities with CREP and other cost share programs for pastureland. Buffering streams and removing livestock access has proven to be a long-term solution to reduce nutrients and sediment, and allow degraded streams to restore themselves.

Table 4: Contract Distribution

River Basin	Number of Acres	Number of Contracts	Approximate Stream Miles Protected
Cape Fear	213.9	14	8.8
Chowan	5,713.3	435	162.7
Lumber	264.8	23	8.3
Neuse	5,243.1	397	158.0
Pasquotank	382.8	12	11.4
Roanoke	573.6	14	15.8
Tar-Pamlico	17,855.7	718	592.8
White Oak	5.4	1	0.30
Yadkin-PeeDee	166.2	16	20.9

Early in the program there were concerns with the approved width of the buffer practices as it relates to water quality benefits. CREP also has a wildlife component that allowed for the larger widths. However, the program enrollment size is changing as more pastureland is being enrolled. These enrollments have significantly narrower buffers, 50-100 feet. The acreages are not large however the number of stream miles that are protected through 30-year or permanent easements will prove to provide longer term water quality protection as well as provide a wildlife corridor.

Contracts Upgraded to Permanent Conservation Easements

It has been a goal of CREP to increase permanent easement enrollment. In 2008, the payment schedule was modified by including an option to allow existing enrollees to upgrade their term contract or easement to a permanent easement.

Enrollment of Existing Buffer Acreage

Existing Forested Buffer – existing acreage may be enrolled in the state incentive program but not CRP. The ratio of existing buffer enrolled to eligible cropland enrolled under CREP shall not exceed 1:1 for the Program. On May 16, 2018, the Soil and Water Conservation Commission approved a 10:1 ratio for existing buffer to new enrollment ratio with a 10% error so that the surveyors do not need to make another trip to adjust the easement. It is not the intention for the survey crew to have a 10% variance on a large track (10% on 100 acres would be 10 acres, which would be unacceptable). The change to existing buffers was most important factor for our historic backlog. To date we have enrolled 1,116 acres of existing buffer into permanent protection.

Easement Stewardship

All acquired easements must be monitored to ensure compliance. The most effective tool available to manage monitoring initiatives is the online Property Stewardship Database. The online portal allows improved monitoring of CREP easements by providing the capacity to upload photographs;

view previous site conditions, and more efficiently track changes in ownership. Eventually the online Property Stewardship Database will automatically schedule site inspections based on risk.

In 2014, the Division approved an Easement Monitoring Protocol as standard operating procedure. All CREP easements will be placed into a tier based on easement close date, accessibility to property, adjacent properties, and violation history and potential. Depending on the tier, CREP easements will be monitored twice a year, once a year, once every other year, or once every third year. The tier system is necessary due to the limited number of monitoring staff. This protocol will ensure we monitor each easement in a systematic manner.

The following describes the four (4) risk categories and their recommended monitoring frequencies and methods.

Very High Frequency Properties – This category includes all properties where more than 50% of the conservation boundary abuts municipal parks, golf courses, residences, or any combination of these land uses. This category also includes all sites with a major violation for a minimum of two years following resolution of the violation. These sites shall be monitored semi-annually, using only on the ground monitoring.

High Frequency Properties – This category includes all properties where 20 to 50% of the conservation boundary abuts municipal parks, golf courses, residences, or any combination of these land uses. This category also includes all sites abutting current or future (if known) livestock operations where the project is subject to access by livestock in the event of a fence failure. This category includes, a change in the adjacent property (such as clear cutting or mining), natural regeneration as the practice in Zone 1, and all sites with a minor violation for a minimum of two years following resolution of the violation. These sites shall be monitored annually, using only on the ground monitoring.

Medium Frequency Properties – This category includes all properties not included in one of the other risk categories. These sites will be monitored on the ground at a minimum of every other year. Aerial reviews may be conducted in the years when on the ground monitoring is not completed.

Low Frequency Properties – This category includes all properties where more than 50% of the conservation boundary is surrounded by local, state or federal property or properties that are in natural condition and are managed for conservation. In addition, this category may include properties that the division identifies as low risk based on their past monitoring history or other site-specific factors. These sites shall be monitored on the ground at least every third year. Aerial monitoring may be conducted on these sites in years where on the ground monitoring is not conducted.

Once a site has had additional monitoring without violations, the number of properties assigned a low risk will increase.

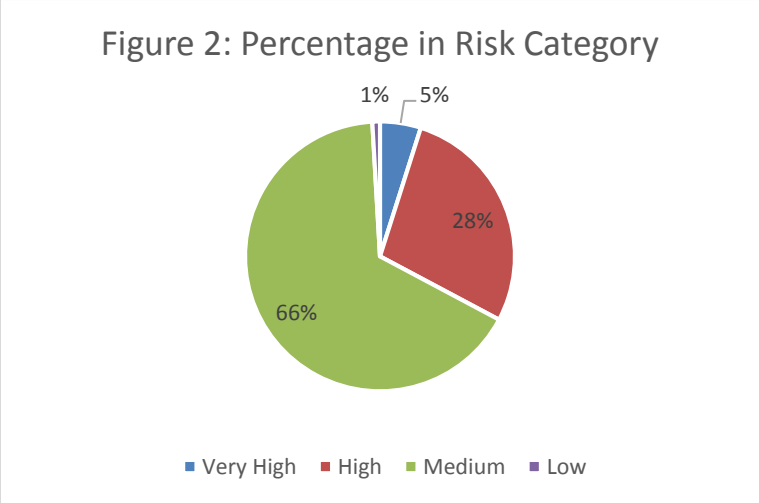
Other Considerations for Determining Risk

In the event that adjacent land use changes are discovered during monitoring, the site risk will be reevaluated to determine if the monitoring frequency should be changed to a different risk category.

CREP staff took over monitoring duties of all CREP easements in 2013. In federal FY 2019, division staff monitored 484 properties (increase of almost 100 properties from the previous year) of the 1,219 total CREP easements. The CREP Manager was asked to follow-up on 40 monitoring inspections due to a possible violation. The number of monitoring violations went down even though the number of inspections increased. Last year 8.3% of the properties were found to be in non-compliance. CREP is actively working with the landowners to achieve compliance. Most of the violations involved vegetative cutting. The most serious issue was an unauthorized clear-cut. In addition, staff has been working to identify the risk categories for each property. The assignment of the risk category is time consuming as it reviews previous monitoring reports, reviews aerial images, occasionally inspects the original files, and makes necessary ownership changes in the database. Table 5 demonstrates how the easements have been categorized thus far. Once a site has had additional monitoring without violations, the number of properties assigned a low risk will increase. This year four percent of the properties were moved from the Medium to the High category because of violations and additional enrollments.

Table 5: Risk Category Assessments

Risk	Number
Very High	59
High	336
Medium	799
Low	11



As another mechanism of preventing easement violations, CREP staff continues to review and provide comment on all mining permits submitted to the Division of Energy, Mining, and Land Resources. In FY19, staff reviewed 35 mining permit applications. FSA was notified that one application may impact a CRP project.

CREP Education and Outreach

CREP staff have taken every effort to attend workshops and training events for landowners who may be interested in CREP. Exhibition booths and materials were staffed at the NC Association of Soil and Water Conservation Districts annual meeting, Carolina Farm Stewardship Association

Conference, and the Sustainable Forestry & Land Retention Project. We participated at the Sustainable Forestry & Land Retention Project for the first time. We had significant interest and we will continue with this workshop in the future.

DSWC Staffing Changes

The DSWC CREP unit was fully staffed for a portion of this fiscal year. However, in November 2018, the southern coastal plain field rep resigned leaving us one person short again until the position was filled in March. This position was again open from June until October 2019. The western field rep position was vacant from February until May 2019. This position was vacant again from July through October.

Challenges

Violations

Each year, the national FSA office issues a letter to the landowners for all expired CRP contracts, regardless of the type of signup (CREP, General, SAFE, FWP, etc.) under which the land was enrolled. Because the letters are generated at the national office and are generic with regards to content (informing of contract expiration, last payment, thanking for participation), the letter does not get into specifics. It states, "you are no longer obligated to the terms and conditions of the CRP contract". We have found that landowners who receive the FSA letter are clearcutting the CREP easements with 15 years remaining in the State easement. **These violations are avoidable**. As a partner to FSA, the NC CREP continues to strongly request that letter be modified to put the landowner on notice that the expiring CRP may not relieve them of other program responsibilities such as CREP and the landowner should check with the other program prior to management.

Suspension of Enrollments

Knowing that FSA would suspend enrollments starting on August 23, 2019, we devoted almost all our time with enrollment at the expense of monitoring. It seems that each year enrollments are interrupted by FSA just as we are gaining momentum from the previous year's closure. This stop and starting is very disruptive and causes a lot of confusion with producers. We have 39 projects in the pipeline awaiting closing, a historic backlog. Monitoring will continue until FSA allows enrollment.

Federal Payment Cap

Many states have reported that their CREP programs cannot compete with current commodity prices. North Carolina appears to struggle with this same issue as we approach potential enrollees. CREP allows to double the soil rental rate not to exceed $150 per acre. There are many locales where a double soil rental rate would exceed this cap. The rental cap of $150 was

created in 1999. **It is recommended that our cap be re-evaluated by FSA and adjusted upwards to $250. Adjusting the cap upward would allow the Federal government to be more in line with the commitments made in the Memorandum of Agreement between the State of NC and USDA setting up CREP. The State continues to be well above the required 20% match.**

Federal Caps on Pasture BMPs

The new Farm Bill removed the national caps for water developments, water facilities, pipelines and livestock crossings. Instead of having caps for each component, we will now have approval authority as follows:

- If the cost share amount per component per contract is $4000 or less, then the approval authority is the County Committee.
- If the cost share amount per component per contract is between $4001 and $7500, then the approval authority is the State Committee.
- If the cost share amount per component per contract is over $7500, then the approval authority will be the Deputy Administrator of Farm Programs.

The State Committee is establishing the cost share rates to represent the average cost of installing the components. Also, the cost-share component will now be paid as 50% of cost not to exceed a maximum amount for the types of components commonly used. FSA is discussing using components that are in the same format as components that are used for NRCS's other programs.

State CREP Expenses

State appropriations fully support 6 CREP staff. We use appropriations from the General Assembly and grant funds from the Clean Water Management Trust Fund for acquisitions. The N.C. Agriculture Cost Share Program can pay for a portion of all BMPs proposed for a CREP enrollment. As presented in Table 7, the State invested over $933 thousand in CREP in 2019. To date, the State has contributed $31.5 million. Realizing the environmental benefits (Table 3), CREP is a cost-effective method to improve water quality and wildlife habitat.

Table 7: State CREP Expenses

	FY 2019	Cumulative
State Bonus Payment for State Option	$125,381	$10,800,373
NCACSP Cost Share Payments	$110,256	$2,679,099
Soil and Water Conservation Administrative Fees	$ -	$73,254
State Administration Expenses	$631,330	$11,376,279
Operating Support	$40,366	$2,916,065
CREP Pilot Program	$ -	$12,000
Monitoring	$ -	$1,708,467
Stewardship	$25,778	$1,907,220
Total	$933,110	$31,472,627

The total expenditures (Federal and State) of CREP is presented in Table 8.

Table 8: CREP Total Federal and State Expenditures, FY 2000 - 2019

CRP Payments (Life of Contract)	$	62,392,419
Federal Cost Share	$	3,878,172^
Stewardship Endowment	$	1,907,220
State Expenses for CREP Enrollments	$	29,565,407
Total Program Costs	**$**	**97,743,218**

^ FSA reports that they cannot calculate the amount of cost share they provided (Personal communication from Satterfield to Galamb, 1/14/2020). CREP assumes that they matched our cost share in 2019.

Thus far the state has contributed a 32.2% match, exceeding the requirement for incurring 20% of the total program costs. The state funds do not include state appropriated and awarded grant funds available, but not yet expended.

Conclusions

CREP provides significant environmental benefits at a low cost. The Federal annual soil rental rates and the cap should be increased. Many of the violations can be avoided if FSA modified their letter to advise landowner that they may still have State or other contract responsibilities. The State of NC is bearing more than their required share of the program costs. Increasing the Federal caps will return the State costs closer to the 20% match required in our agreement.