



**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  
The Honorable David Rouzer, Co-Chair  
The Honorable Daniel Clodfelter, Co-Chair  
The Honorable Mitch Gillespie, Co-Chair  
The Honorable Ruth Samuelson, Co-Chair  
The Honorable Pricey Harrison, Co-Chair

**FROM:** David B. Williams, Deputy Director *DBW*

**DATE:** October 6, 2011

**RE:** 2011 Annual Report on the Implementation of the Lagoon Conversion Program

This memorandum transmits the 2011 Annual Report on the Implementation of the Lagoon Conversion Program as required by S.L. 2007-523. The session law requires the Division of Soil and Water Conservation to provide annual reports to the Environmental Review Commission on implementation and the account status of the program.

If you have any questions or need additional information, please contact me at 715-6103 or by email at [David.B.Williams@ncagr.gov](mailto:David.B.Williams@ncagr.gov).

Enclosure

**cc:** Commissioner Steve Troxler  
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# **ANNUAL REPORT TO THE ENVIRONMENTAL REVIEW COMMISSION OF THE NORTH CAROLINA GENERAL ASSEMBLY ON THE IMPLEMENTATION OF THE LAGOON CONVERSION PROGRAM**

## **INTRODUCTION**

In 2007, the North Carolina Lagoon Conversion Program (LCP) was established by the North Carolina General Assembly. The LCP is administered by the NC Division of Soil and Water Conservation (DSWC) through the existing North Carolina Agriculture Cost Share Program. The purpose of the LCP is to promote adoption of innovative swine waste management technologies that meet specific performance standards. Under the LCP, swine producers may submit applications to convert existing lagoon and sprayfield systems to innovative animal waste management systems. Swine farms in operation on or before September 1, 2007 are eligible for grants of up to ninety percent of the average cost of each system and a maximum of \$500,000 per year to install the selected technology. Eligible projects must meet the following performance standards:

- Eliminate direct discharge, seepage or runoff.
- Substantially eliminate ammonia emissions.
- Substantially eliminate odor.
- Substantially eliminate disease-transmitting vectors and pathogens.
- Substantially eliminate nutrient and heavy metals in soils and groundwater.

## **LCP ADVISORY COMMITTEE**

In accordance with Section 2.(e) of S.L. 2007-523, the Director of the Division of Soil and Water Conservation established an advisory committee to assist the Division with implementation of the Lagoon Conversion Program. The entire committee has met a total of five times. In addition, various subcommittees of the advisory group have met to address specific issues. The Advisory Committee is comprised of the following members:

- J.B. Martin, State Conservationist, USDA-Natural Resources Conservation Service (NRCS)
- Molly Diggins, State Director, N.C. Sierra Club

- Lamont Futrell, President, Frontline Farmers; Swine Producer
- Dewitt Hardee, Environmental Program Manager, N.C. Dept. of Agriculture and Consumer Services
- Heather Jacobs, Riverkeeper, Tar-Pamlico River Foundation
- Deborah Johnson, Chief Executive Officer, N.C. Pork Council
- Dr. Joe Rudek, senior Scientist, Environmental Defense Fund
- Coleen Sullins, Director, Division of Water Quality/NCDENR
- Dr. Mike Williams, Director, NC Animal and Poultry Waste Management Center, N.C. State University

## **LCP IMPLEMENTATION**

In 2007-08 the Division of Soil and Water Conservation, with input and assistance from the LCP Advisory Committee, selected three participants in Sampson County to receive LCP funding to install innovative technologies. One of the applicants declined to sign the Agriculture Cost-Share Agreement due to concern about the risk of implementing new waste management technology given the current economic difficulties facing the swine industry. As a result, only two projects were funded from Round 1 applications.

Section 2.(d)5 of S.L. 2007-523 directs the Division to “investigate and pursue other funding sources to supplement State funds, including federal, local, and private funding sources.” In accordance with this directive, the Division has actively pursued additional funding opportunities for the LCP.

In 2009 the Division proposed and was approved for a Cooperative Conservation Partnership Initiative Agreement with the USDA Natural Resources Conservation Service. The CCPI agreement established a partnership between the Division of Soil and Water Conservation and the USDA-Natural Resources Conservation Service to provide funding to swine farmers who switch from hog lagoons to more environmentally friendly and innovative waste management systems. The CCPI agreement established three priority levels for producer applications, with the highest priority being assisting applicants to install innovative waste treatment technology that would meet the Swine Waste Management System Performance Standards as specified in 15A NCAC 02T.1307. Level 1 applications would be prioritized using the same funding matrix previously established for the LCP.

Level 2 priority would be for applicants seeking funding to close existing anaerobic lagoons. North Carolina has approximately 4,000 active anaerobic lagoons on 2,200 swine farms. In addition, North Carolina has approximately 1,000 inactive lagoons that need to be properly closed. Level 2 funding applications would be prioritized as follows:

- 1) Lagoons serving active facilities at the time of application;
- 2) Lagoons located in the 100 year floodplain;
- 3) All other anaerobic lagoons that have not been properly closed.

Level 3 would be for producers seeking to install lagoon covers and/or digesters and/or other waste management technologies to capture methane and produce renewable energy or otherwise produce renewable energy from a swine farm or for activities that would be employed for the capture of methane or avoidance of methane production.

In accordance with the terms of the agreement, the USDA-NRCS will direct up to \$1.18 million per year for up to 5 years to projects that meet the priorities described above. Funding comes from the Natural Resources Conservation Service's Environmental Quality Incentives Program (EQIP).

In fiscal years 2008-09 and 2009-10 five projects were approved for funding through the CCPI with supplemental funding provided through LCP.

Table 1 describes the seven projects that are currently under contract using Lagoon Conversion Program funds as selected through rounds 1, 2, and 3.

In addition to the funds committed to contracts for lagoon conversion projects in 2008-09 and 2009-10, over \$300,000 of USDA funds have been encumbered to contracts to close lagoons on nine farms in support of the CCPI agreement, level 2 priority.

## **NEW PROJECTS FOR 2010-11**

In April, 2011 the Division of Soil and Water Conservation solicited additional applications to participate in the LCP/CCPI. Only one application was received that qualified for LCP funding. At its August 16, 2011 meeting the Soil and Water Conservation Commission

allocated \$105,000 to support the request from the Douglas Jernigan Farm in Wayne County. The Jernigan farm actually exists as two separate operations. One of the operations has already been converted to the Supersoils USA on-farm solids separation and liquid treatment system. LCP funding will be used to connect the second farm to the treatment system installed on the first operation. It was determined that the Jernigan application did not qualify for CCPI funding since it involves expansion of an existing treatment system. Table 2 shows the new project selected for 2010-11.

Table 1: Status of LCP/CCPI Projects funded in 2007-08 (round 1), 2008-09 (round 2), and 2009-10 (round 3)

	Project Name	County	LCP Funding Amt.	CCPI Funding Amt.	Total Project Cost (est.)
1	Tyndall Hog & Chicken Farm	Sampson	\$500,000		\$556,000
	Technology: Super-Soils USA, Inc.: on-farm solids separation and liquid treatment system				
	Status: Permit in place; construction estimated 70% complete				
2	Supersoils Centralized Solids Treatment System	Sampson	\$500,000		\$556,000
	Technology: Super-Soils USA, Inc. centralized solids treatment facility (composting)				
	Status: Involves expansion of existing composting operation. Permit in place; construction estimated 98% complete				
3	Rosin Hill Farm	Sampson	\$54,321	\$445,679	\$556,000
	Technology: Super-Soils USA, Inc.: on-farm solids separation and liquid treatment system				
	Status: Permit in place; engineering complete; construction has not yet begun				
4	Loyd-Ray Farm	Yadkin	\$115,000	\$385,000	\$675,525
	Technology: covered anaerobic digester, aeration basin for nitrification and odor control, methane harvesting system, and generator for the production of electricity				
	Status: Facility began phasing-in operation in Spring of 2011. Now fully operational. Ribbon cutting planned for October 28, 2011.				
5	Larry Naylor Farm	Sampson	\$83,000	\$417,000	\$556,000
	Technology: Super-Soils USA, Inc.: on-farm solids separation and liquid treatment system				
	Status: Permit not yet in place.				
6	G & R West Farm	Sampson	\$122,771	\$377,229	\$556,000
	Technology: Super-Soils USA, Inc.: on-farm solids separation and liquid treatment system				
	Status: Permit not yet in place.				
7	C.B. Barefoot Farm	Sampson	\$112,354	\$387,646	\$781,000
	Technology: Super-Soils USA, Inc.: on-farm solids separation and liquid treatment system				
	Status: Permit not yet in place.				
	Totals		\$1,487,446	\$2,0125,554	\$4,236,525

All of the CCPI funds for 2010-11 were committed to:

- Installing an anaerobic digester on a farm in Harnett County
- Installing a cover on a lagoon in Wayne County
- Lagoon closure projects

Table 2. New LCP/CCPI Project selected in 2010-11 (round 4)

Project Name	County	LCP Funding Amt.	CCPI Funding Amt.	Total Project Cost (est.)
Douglas Jernigan Farm	Wayne	\$105,000		\$556,000
Technology: Super-Soils USA, Inc.: on-farm solids separation and liquid treatment system. LCP funding used to connect 2 <sup>nd</sup> farm operated by Mr. Jernigan to another farm where Supersoils system is already installed.				
Status: Not yet under contract. Permit not yet in place.				
Totals		\$105,000		\$200,000

## LCP Account Status

Section 3 of Session Law 2007-523 established the Swine Farm Waste Management Conversion Account and provided an initial allocation of \$2,000,000 to be used LCP authorized expenditures. Funds from this account have been used as follows:

FY 2007-08 One-Time Appropriation	\$2,000,000.00
Total contract expenditures to date:	\$656,833.00
Total encumbrance remaining in 8 contracts	\$935,613.00
DENR Budget Reversion for FY 2008-09:	\$400,000.00
Miscellaneous Operating Expenses to date:	\$2,952.84
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Unexpended LCP Account Funds	\$940,214.16
Unencumbered LCP Account Funds	\$4,601.16
CCPI Supplemental Allocation (5 projects):	\$2,012,554.00

## NEXT STEPS

The Division continues to work with the cooperating producers, NC Division of Water Quality (DWQ), USDA-NRCS, the NC Animal and Poultry Waste Management Center and other interested parties to implement these projects. All permits have been obtained for construction of Rounds 1 and 2 technologies.

The Division of Soil and Water Conservation has secured funding from NRCS to support technical assistance for the LCP/CCPI to assist the

participating producers with completing permitting, designs, and installation for innovative technologies. The Division will also use these funds for evaluating operation of the new systems, for working to promote the program to additional potential applicants, and for working with technology providers and the NC Animal and Poultry Waste Management Center to continue development and evaluation of additional alternative waste management technologies.