

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. Council
- Dr. Joe Rudek, senior Scientist, Environmental Defense Fund
- Coleen Sullins, Director, Division of Water Quality/NCDENR
- Dr. Mike Williams, Director, Animal 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 more than \$1.1 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 year 2008-09 two projects were approved for funding through the CCPI with supplemental funding provided through LCP.

Table 1 below describes the four projects that are currently under contract using Lagoon Conversion Program funds.

In addition to the funds committed to contracts for lagoon conversion projects in 2008-09, over \$300,000 of CCPI funds were encumbered to contracts to close lagoons on nine farms in accordance with Level 2 priorities specified in the original proposal. There were no remaining funds available for Level 3 priority projects.

NEW PROJECTS FOR 2009-10

For 2009-10, the Division of Soil and Water Conservation and NRCS modified the priorities for CCPI funding to include an additional level. For 2009-10, the highest priority for CCPI and LCP funding was to work with applicants to install innovative waste treatment technology that would meet the Swine Waste Management System Performance Standards that also included an alternative energy component. Technologies that meet the performance standards but do not include an energy component would continue as the 2nd priority.

Table 1: Status of LCP/CCPI Projects funded in 2007-08 and 2008-09

Project Name	County	LCP Funding Amt.	CCPI Funding Amt.	Total Project Cost (est.)
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 90% complete				
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 has not yet begun.				
Rosin Hill Farm	Sampson	\$54,321	\$445,679	\$556,000
Technology: Super-Soils USA, Inc.: on-farm solids separation and liquid treatment system				
Status: Not yet permitted, Construction has not yet begun				
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: Permit in place, Construction expected to begin in October, 2010.				
Totals		\$1,169,321	\$830,679	\$2,343,525

In April, 2010 the Division of Soil and Water Conservation solicited additional applications to participate in the LCP/CCPI. Six farms submitted applications, but none included an energy component. Three applications were selected for funding in June 2010, all three using the Supersoils System USA, Inc. on-farm solids separation and liquid treatment system technology, and all three in Sampson County. Table 2 below shows the three new applications selected for 2009-10. All of the CCPI funds for 2009-10 were committed to lagoon conversion projects.

Table 2. New LCP/CCPI Projects selected in 2009-10.

Project Name	County	LCP Funding Amt.	CCPI Funding Amt.	Total Project Cost (est.)
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.				
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.				
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		\$318,125	\$1,181,875	\$1,893,000

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 of 7 LCP Grants awarded since 2007	(\$1,487,446.00)
CCPI Supplemental Allocation (5 projects):	(\$2,012,554.00)
DENR Budget Reversion for FY 2008-09:	(\$400,000.00)
Miscellaneous Operating Expenses to date:	(\$2,952.84)

Unencumbered LCP Account Funds	\$113,892.16

It is anticipated that remaining LCP account funds will be used to provide match for one or more additional lagoon conversion projects in cooperation with CCPI in FY 2010-11.

NEXT STEPS

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

The Division of Soil and Water Conservation has secured funding from NRCS to support an engineering position for 2 years to assist the participating producers with completing designs and installation for innovative technologies. The engineer will also be responsible 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 Animal and Poultry Waste Management Center to continue development and evaluation of additional alternative waste management technologies.

The Division will cooperate with NRCS to solicit additional participants for the LCP and CCPI for 2010-11 funding. Sufficient uncommitted LCP funds remain to supplement CCPI funding for 1 to 2 additional projects.