

**GENERAL ASSEMBLY OF NORTH CAROLINA  
SESSION 2009**

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**SENATE BILL 1020  
Agriculture/Environment/Natural Resources Committee Substitute Adopted 5/12/09  
House Committee Substitute Favorable 8/6/09**

Short Title: Improve Upper Neuse Basin Water Quality.

(Public)

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Sponsors:

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Referred to:

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March 26, 2009

A BILL TO BE ENTITLED

1 AN ACT TO PROTECT AND RESTORE WATER QUALITY AND QUANTITY IN THE  
2 UPPER NEUSE RIVER BASIN, FALLS LAKE, AND OTHER DRINKING WATER  
3 SUPPLY RESERVOIRS BY DIRECTING THE ENVIRONMENTAL MANAGEMENT  
4 COMMISSION TO PROVIDE CREDIT TO LOCAL GOVERNMENTS,  
5 LANDOWNERS, AND OTHERS WHO REDUCE WATER POLLUTION IN THE  
6 UPPER NEUSE RIVER BASIN BEFORE PERMANENT RULES ARE ADOPTED AND  
7 TO MODIFY THE NUTRIENT MANAGEMENT STRATEGY AND ADOPT A  
8 SEDIMENTATION STRATEGY FOR CERTAIN DRINKING WATER SUPPLY  
9 RESERVOIRS.  
10

11       Whereas, that portion of the Neuse River Basin that is upstream of the Falls Dam  
12 and that includes Falls Lake is often referred to as the Upper Neuse River Basin; and

13       Whereas, the nine drinking water supply reservoirs in the Upper Neuse River Basin  
14 provide water for drinking, sanitation, food processing, cooling, industrial processing, and other  
15 essential uses for the citizens of Orange, Person, Durham, Granville, and Wake Counties; and

16       Whereas, the General Assembly enacted S.L. 1997-458, the Clean Water  
17 Responsibility and Environmentally Sound Policy Act, to protect and restore the waters of the  
18 State in 1997; and

19       Whereas, the General Assembly enacted S.L. 2005-190, the Clean Lakes Act, to  
20 protect and restore the drinking water supply reservoirs of the State in 2005; and

21       Whereas, the North Carolina Division of Water Quality in the Department of  
22 Environment and Natural Resources listed Falls Lake in the Upper Neuse River Basin as  
23 impaired waters in 2008, and the U.S. Environmental Protection Agency also classifies Falls  
24 Lake as impaired waters due to nutrients and turbidity; and

25       Whereas, the quality and quantity of the water in the nine drinking water supply  
26 reservoirs in the Upper Neuse River Basin are essential to public health, environmental quality,  
27 and the economic vitality of the region; and

28       Whereas, the North Carolina Environmental Management Commission may not  
29 develop a nutrient management strategy and rules to implement the nutrient management  
30 strategy for the Upper Neuse River Basin by July 1, 2009, as required by law; and

31       Whereas, delayed development of a nutrient management strategy and rules to  
32 implement the nutrient management strategy threatens the quality and quantity of drinking  
33 water supply reservoirs in the Upper Neuse River Basin; Now, therefore,  
34 The General Assembly of North Carolina enacts:



1           **SECTION 1.(a)** Definition. – For purposes of this section, the term "Upper Neuse  
2 River Basin" is that portion of the Neuse River Basin upstream of the Falls Dam, including  
3 Falls Lake.

4           **SECTION 1.(b)** Credit for Early Adoption. – The Environmental Management  
5 Commission shall encourage local governments, landowners, and others to develop, adopt, and  
6 implement policies and practices to reduce the runoff and discharge of nitrogen, phosphorus,  
7 sediment, and other pollutants into the surface waters and drinking water supply reservoirs in  
8 the Upper Neuse River Basin before it adopts permanent rules to implement the nutrient  
9 management strategy and the turbidity strategy for Upper Falls Lake. The Environmental  
10 Management Commission shall, in its permanent rules, provide credit for the early  
11 implementation of the nutrient management strategy for the Upper Neuse River Basin and the  
12 turbidity strategy for Falls Lake to local governments, landowners, and others who implement  
13 policies and practices after January 1, 2007, to reduce runoff and discharge of nitrogen,  
14 phosphorus, and sediment in the Upper Neuse River Basin.

15           **SECTION 1.(c)** Reports. – The Environmental Management Commission shall  
16 report its progress in implementing this section to the Environmental Review Commission as  
17 part of each quarterly report it makes pursuant to G.S. 143B-282(b).

18           **SECTION 2.(a)** Section 3 of S.L. 2005-190, as amended by Section 31 of S.L.  
19 2006-259, reads as rewritten:

20           **"SECTION 3.(a) Applicability of section to certain reservoirs.** – This section applies  
21 only to drinking water supply reservoirs that meet all of the following criteria as of 1 July 2005:

- 22           (1) The reservoir serves a population greater than 300,000 persons.
- 23           (2) The Environmental Management Commission has classified all or any part  
24 of the water in the reservoir as a nutrient sensitive water (NSW).
- 25           (3) Water quality monitoring data indicates that water quality in the reservoir  
26 violates the chlorophyll A standard.
- 27           (4) The Division of Water Quality of the Department of Environment and  
28 Natural Resources has not prepared or updated a calibrated nutrient response  
29 model for the reservoir since 1 July 2002.

30           **"SECTION 3.(b) Temporary limitation on increased nutrient loading.** – If the  
31 Environmental Management Commission determines either that water quality in all or in any  
32 part of a drinking water supply reservoir to which this section applies does not meet current  
33 water quality standards or that it is likely that water quality will not meet water quality  
34 standards at any time prior to 1 July 2010, the Commission shall not make any new or  
35 increased nutrient loading allocation to any person who is required to obtain a permit under  
36 G.S. 143-215 for an individual wastewater discharge directly or indirectly into that reservoir.  
37 This limitation on new or increased nutrient loading allocation shall not be construed to  
38 prohibit a person who holds a permit for a wastewater discharge into a drinking water supply  
39 reservoir from purchasing a nutrient loading allocation from another person who holds a permit  
40 for a wastewater discharge into the same drinking water supply reservoir. This subsection  
41 expires with respect to a drinking water supply reservoir when permanent rules adopted by the  
42 Commission to implement the nutrient management strategy for that reservoir become  
43 effective.

44           **"SECTION 3.(c) Nutrient management strategy.** – The Environmental Management  
45 Commission shall develop a nutrient management strategy for drinking water supply reservoirs  
46 to which this section applies by ~~1 July 2009~~ 15 January 2011. The nutrient management  
47 strategy shall be based on a calibrated nutrient response model that meets the requirement of  
48 G.S. 143-215.1(c5). The nutrient management strategy shall include specific mandatory  
49 measures to achieve the reduction goals. ~~The Commission shall consider the cost of the~~  
50 ~~proposed measures in relation to the effectiveness of the measures.~~ In developing the nutrient  
51 management strategy, the Commission shall consider the effectiveness of measures previously

1 implemented in the watershed and the cost of the proposed measures in relation to their  
2 effectiveness. These measures could include, but are not limited to, buffers, erosion and  
3 sedimentation control requirements, post-construction stormwater management, agricultural  
4 nutrient reduction measures, the addition of nutrient removal treatment processes to point  
5 source permitted wastewater treatment plants, the removal of point source discharging  
6 wastewater treatments through regionalization and conversion to nondischarge treatment  
7 technologies, measures to address nutrient inputs from on-site wastewater treatment systems,  
8 control of atmospheric deposition, allowing the sale and purchase of nutrient offsets, allowing  
9 trading of nutrient loading allocations and credits for nutrient reductions, and any other  
10 measures that the Commission determines to be necessary to meet the nutrient reduction goals.  
11 To the extent that one or more other State programs already mandate any of these measures, the  
12 nutrient management strategy shall incorporate the mandated measures and any extension of  
13 those measures and any additional measures that may be necessary to achieve the nutrient  
14 reduction goals. In making a nutrient loading allocation to a permit holder, the Commission  
15 shall, to the extent allowed by federal and State law, give consideration to all voluntary efforts  
16 taken by the permit holder to protect water quality prior to the development of the nutrient  
17 management strategy.

18 **"SECTION 3.(d) Eligibility under the Clean Water Revolving Loan and Grant Act. –**  
19 The definitions set out in G.S. 159G-3 apply to this subsection. The operator of a wastewater  
20 treatment works that is owned by an agency of the State may apply for a loan or grant under  
21 Chapter 159G of the General Statutes on the same basis as any other applicant if the operator is  
22 a local government unit and if the local government unit operates the wastewater treatment  
23 works pursuant to a contract with the State agency that contemplates that the local government  
24 unit will eventually acquire ownership of the wastewater treatment works.

25 **"SECTION 3.(e) Implementation; rulemaking. –** The Environmental Management  
26 Commission shall adopt permanent rules to implement the nutrient management strategies  
27 required by this section by ~~1 July 2009~~ 15 January 2011. The rules shall require that reductions  
28 in nutrient loading from all sources begin no later than five years after the rules become  
29 effective. The rules shall require that stormwater management programs to reduce nutrient  
30 loading from new development be implemented no later than 30 months after the rules become  
31 effective.

32 **"SECTION 3.(f) Reports. –** The Environmental Management Commission shall report its  
33 progress in implementing this section to the Environmental Review Commission as a part of  
34 each quarterly report it makes pursuant to G.S. 143B-282(b)."

35 **SECTION 2.(b)** S.L. 2005-190, as amended by Section 31 of S.L. 2006-259, is  
36 amended by adding four new subsections to read:

37 **"SECTION 3.(g) Compensatory mitigation for riparian buffer loss; nutrient offset**  
38 **purchases. –** Compensatory mitigation for riparian buffer loss in the watershed of a drinking  
39 water supply to which this section applies must be performed in the watershed of the drinking  
40 water supply. The Environmental Management Commission may further limit the area in which  
41 compensatory mitigation for riparian buffer loss must be performed in the watershed of a  
42 drinking water supply to which this section applies. Any nutrient offset purchased to offset  
43 loading in the watershed of a drinking water supply to which this section applies may only be  
44 obtained from an offset project located in the watershed of the drinking water supply. The  
45 Environmental Management Commission may further limit the area from which nutrient offsets  
46 may be obtained in the watershed of a drinking water supply to which this section applies.

47 **"SECTION 3.(h) Additional standards for land-disturbing activities in the water**  
48 **supply watershed. –** For purposes of this section, "land-disturbing activity" does not include  
49 the land-disturbing activities set out in G.S. 113A-52.01. In addition to any other requirements  
50 of State, federal, and local law, land-disturbing activity in the watershed of the water supply

1 reservoir to which this section applies shall meet all of the following design standards for  
2 sedimentation and erosion control:

- 3 (1) Erosion and sedimentation control measures, structures, and devices shall be  
4 planned, designed, and constructed to provide protection from the runoff of  
5 the 25-year storm that produces the maximum peak rate of runoff as  
6 calculated according to procedures set out in the United States Department  
7 of Agriculture Soil Conservation Service's "National Engineering Field  
8 Manual for Conservation Practices" or according to procedures adopted by  
9 any other agency of the State or the United States or any generally  
10 recognized organization or association.
- 11 (2) Sediment basins shall be planned, designed, and constructed so that the basin  
12 will have a settling efficiency of at least seventy percent (70%) for the  
13 40-micron size soil particle transported into the basin by the runoff of the  
14 two-year storm that produces the maximum peak rate of runoff as calculated  
15 according to procedures in the United States Department of Agriculture Soil  
16 Conservation Service's "National Engineering Field Manual for  
17 Conservation Practices" or according to procedures adopted by any other  
18 agency of the State or the United States or any generally recognized  
19 organization or association.
- 20 (3) Newly constructed open channels shall be planned, designed, and  
21 constructed with side slopes no steeper than two horizontal to one vertical if  
22 a vegetative cover is used for stabilization unless soil conditions permit  
23 steeper slopes or where the slopes are stabilized by using mechanical  
24 devices, structural devices, or other acceptable ditch liners. In any event, the  
25 angle for side slopes shall be sufficient to restrain accelerated erosion.
- 26 (4) For an area of land-disturbing activity where grading activities have been  
27 completed, temporary or permanent ground cover sufficient to restrain  
28 erosion shall be provided as soon as practicable, but in no case later than  
29 seven days after completion of grading. For an area of land-disturbing  
30 activity where grading activities have not been completed, temporary ground  
31 cover shall be provided as follows:
- 32 a. For an area with no slope, temporary ground cover shall be provided  
33 for the area if it has not been disturbed for a period of 14 days.
- 34 b. For an area of moderate slope, temporary ground cover shall be  
35 provided for the area if it has not been disturbed for a period of 10  
36 days. For purposes of this subdivision, "moderate slope" means an  
37 inclined area, the inclination of which is less than or equal to three  
38 units of horizontal distance to one unit of vertical distance.
- 39 c. For an area of steep slope, temporary ground cover shall be provided  
40 for the area if it has not been disturbed for a period of seven days.  
41 For purposes of this subdivision, "steep slope" means an inclined  
42 area, the inclination of which is greater than three units of horizontal  
43 distance to one unit of vertical distance.

44 **"SECTION 3.(i)** For purposes of this section, "land-disturbing activity" does not include  
45 the land-disturbing activities set out in G.S. 113A-52.01. No later than December 31, 2011, the  
46 Sedimentation Control Commission shall adopt rules for the control of erosion and  
47 sedimentation resulting from land-disturbing activities in the watershed of the water supply  
48 reservoir to which this section applies. In developing the rules, the Commission shall consider  
49 the standards established pursuant to Section 3(h), as enacted by Section 2(b) of this act.

50 **"SECTION 3.(j)** The Department of Environment and Natural Resources, in consultation  
51 with the Environmental Management Commission, shall identify improvements needed in the

1 design, operation, and siting of septic tank systems in order to reduce excess nutrient loading  
2 from septic tank systems in the watershed of a drinking water supply to which this section  
3 applies. The Department shall report its findings and recommendations for specific changes to  
4 standards adopted by the Commission for Public Health pursuant to G.S. 130A-355 to the  
5 Commission for Public Health and to the Environmental Review Commission no later than  
6 March 1, 2010."

7 **SECTION 3.** Concurrent with the permanent rule making required by Section 3 of  
8 S.L. 2005-190, as amended by Section 31 of S.L. 2006-259 and Section 2(a) of this act, and  
9 pursuant to G.S. 143-215.8B, the Environmental Management Commission shall adopt  
10 temporary rules. The Commission shall adopt the temporary rules required by this section by  
11 January 15, 2011.

12 **SECTION 4.** Section 3(h) of S.L. 2005-190, as enacted by Section 2(b) of this act,  
13 becomes effective January 1, 2010, applies to land-disturbing activities begun on or after  
14 January 1, 2010, and expires on the date that rules adopted pursuant to Section 3(i) of S.L.  
15 2005-190, as enacted by Section 2(b) of this act, become effective. The remaining sections of  
16 this act are effective when they become law.