



North Carolina Department of Environment and Natural Resources

Division of Water Quality

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Director

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September 14, 2009

MEMORANDUM

To: Interested parties in the Jordan Lake Watershed
From: Jason Robinson, Environmental Program Consultant, NPS Planning Unit
Subject: Final nonpoint source N and P delivery factors for trading and offset elements of Jordan rules

The following table contains revised, final non-point source nitrogen and phosphorus load delivery factors that affected parties should use to comply with applicable parts of the Jordan nutrient rules. These revised delivery factors were provided to DWQ by Tetra Tech, Inc. in 2003 in partial completion of a contract for the Jordan watershed model. They replace delivery factors presented in the June 2002 report *Nitrogen and Phosphorus Delivery From Small Watersheds to Jordan Lake*, which is referred to in Item (2)(e) of Section 3(d) of Session Law 2009-216 and Sub-item (3)(b)(i) of 15A NCAC 02B .0271 (these factors are referred to as “transport factors” in both of these references). This revised set of delivery factors is more complete than, and in some cases differs from, factors in the above-referenced report. The table below provides values for all 58 14-digit HUs in the Jordan Lake watershed, which account for net impacts of all retention parameters.

These revised delivery factors are to be used to calculate nitrogen and phosphorus delivery to Jordan Lake from the outlet of a given 14-digit HU subwatershed in the Jordan Watershed where delivered loads or load reductions to the lake may be needed under Rules 15A NCAC 2B .0264 - .0271, and Session Law 2009-216. Where these rules require adherence to the Jordan trading rule (15A NCAC 02B .0273), one of the requirements of the trading rule is to account for differences in instream nutrient losses between the location of the reduction need and location of the excess loading reduction. In general, these rules require calculating equivalent delivered load or load reduction at the lake where the load increase is to occur in a different 14-digit HU from the offsetting load reduction.

A map showing the subwatersheds and their associated transport factors, as well as a GIS shape file with the transport factors can be found on the Jordan Nutrient Strategy website:
<http://h2o.enr.state.nc.us/nps/JordanNutrientStrategy.htm>

Please note that these delivery factors do not apply to point sources. Point source delivery factors are provided in RTI’s document “Point Source Nutrient Delivery Model for Jordan Lake”, also available at the above location.

Table: Nitrogen and Phosphorus Delivery Factors for 14-digit HUs

Location (14-Digit HU)		Subwatershed	Total Nitrogen Overall Delivery	Total Phosphorus Overall Delivery
303000	2010010	Haw	24.63%	10.50%
303000	2010020	Haw	37.15%	35.87%
303000	2010030	Haw	43.58%	40.39%
303000	2010040	Haw	49.09%	43.98%
303000	2010050	Haw	54.63%	47.67%
303000	2020010	Haw	14.68%	4.22%
303000	2020020	Haw	21.93%	12.15%
303000	2020030	Haw	48.05%	43.42%
303000	2020040	Haw	32.45%	32.59%
303000	2020050	Haw	31.81%	32.10%
303000	2020060	Haw	47.37%	42.23%
303000	2020070	Haw	54.29%	47.46%
303000	2030010	Haw	60.15%	55.85%
303000	2030020	Haw	44.22%	30.71%
303000	2030030	Haw	25.45%	7.66%
303000	2030040	Haw	42.46%	29.87%
303000	2030050	Haw	64.47%	61.67%
303000	2030060	Haw	38.85%	19.39%
303000	2030070	Haw	35.79%	18.32%
303000	2030080	Haw	72.74%	64.02%
303000	2040010	Haw	29.83%	14.31%
303000	2040020	Haw	28.48%	13.82%
303000	2040030	Haw	71.05%	63.00%
303000	2040040	Haw	32.20%	15.03%
303000	2040050	Haw	52.41%	49.55%
303000	2040060	Haw	53.83%	50.85%
303000	2040070	Haw	67.09%	60.46%
303000	2040080	Haw	52.81%	50.78%
303000	2040090	Haw	54.34%	50.55%
303000	2040100	Haw	75.12%	65.41%
303000	2040110	Haw	65.80%	60.16%
303000	2050010	Haw	74.02%	67.76%
303000	2050020	Haw	80.73%	73.62%
303000	2050030	Haw	41.96%	16.74%
303000	2050040	Haw	79.87%	73.30%
303000	2050050	Haw	70.78%	67.48%
303000	2050060	Haw	79.43%	73.03%

Table: Nitrogen and Phosphorus Delivery Factors for 14-digit Hus (continued)

Location (14-Digit HU)		Subwatershed	Total Nitrogen Overall Delivery	Total Phosphorus Overall Delivery
303000	2050070	Haw	78.10%	72.20%
303000	2050080	Haw	80.06%	73.32%
303000	2050090	Haw	79.05%	72.76%
303000	2050100	Haw	81.16%	74.54%
303000	2060010	Haw	81.02%	74.33%
303000	2060020	Haw	95.06%	96.58%
303000	2060030	Haw	87.86%	91.48%
303000	2060040	Haw	96.78%	97.78%
303000	2060050	Haw	92.13%	94.52%
303000	2060060	Lake - New Hope	94.27%	96.02%
303000	2060062	Lake - Haw	98.20%	98.76%
303000	2060070	UNH	40.32%	18.66%
303000	2060080	UNH	58.81%	44.72%
303000	2060090	LNH	92.03%	94.45%
303000	2060100	UNH	68.76%	62.93%
303000	2060110	UNH	61.50%	57.81%
303000	2060120	UNH	69.48%	63.39%
303000	2060130	UNH	68.96%	63.06%
303000	2060140	UNH	84.63%	89.06%
303000	2060150	LNH	87.71%	91.38%
303000	2060160	LNH	85.50%	89.79%

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