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MEMORANDUM

To: Senator Bob Rucho, Chair, Senate Redistricting Committee
Representative David Lewis, Chair, House Redistricting Committee

From: George Hall, Legislative Services Officer
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This memorandum is to inform the House and Senate Redistricting Committee chairs of a technical issue discovered in five session laws, each of which contains a districting plan prepared by legislative staff using the Maptitude mapping software and the GARDS bill drafting software. The short synopsis of the technical issue is the software code used to translate the maps in Maptitude into language for insertion into a bill draft contained an error. That error in the software code resulted in the omission of some Census blocks in the bill text. Not every Census block is omitted, only Census blocks where the Census block is in a block group or tract that is wholly contained within one segment of a voting tabulation district split between two or more districts. The end result is that while the bill text correctly assigns all units of geography to the appropriate district, the bill text is sometimes incomplete and therefore some units of geography are not assigned to any district.

Since discovering the issue, the software code flaw has been identified and corrected, and all district-related session laws that were generated with the software have been scrutinized. This issue was found to affect the following session laws:

- S.L. 2011-403 (House Bill 925) Lewis Dollar Dockham 4
- S.L. 2011-402 (Senate Bill 455) Rucho Senate 2
- S.L. 2011-404 (Senate Bill 453) Rucho Lewis Congress 3
- S.L. 2011-203 (House Bill 112) Realign Wake Superior Court Districts
- S.L. 2011-169 (House Bill 66) Greene County Commissioners



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It is important to emphasize that the maps and associated statistical reports which were available to members to use for analyzing the bills were not affected by this issue. The map and statistics presented to the members in committee and on the chamber floor accurately reflected the map as it was intended to be written in the bill. This issue was isolated specifically to census block listings within the bill text. The software coding issue has not assigned units of geography to incorrect districts. However, in one or more instances in each of the five session laws, some of the Census blocks simply did not appear in the text which has resulted in unassigned geography in each of the five plans enacted by the General Assembly. Specifically, if a voting tabulation district was split, and in one or the other portion of that split there existed an entire census block group or tract, the program did not reliably write out the associated census blocks.

To provide assurance this issue has been fully identified and corrected, a full-circle automated verification method is now in place. Staff has developed a method by which bill text in the format generated by the software can be used as a starting point to generate a new district plan for comparison with the original. This verification method has been cross-checked against manual districts built from bill text.