



## Planning without the planners: South Carolina's Section 319 local watershed planning process



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### ABSTRACT

The need to address water quality via land use planning is increasingly evident despite institutional and legal silos, as nonpoint source (NPS) pollution is now the dominant obstacle in accomplishing the federal Clean Water Act (CWA)'s fishable and swimmable standards in U.S. surface waters. Quality attainment has been elusive given the numerous and diffuse land use-based pollution sources, forcing the U.S. Environmental Protection Agency (EPA) to adopt a new "total maximum daily load" (TMDL) rule in 2000 that is focused on the receiving water body rather than controlling the contaminant at its source. Simultaneously, there was a policy shift that devolved water quality implementation authority onto states and municipalities (Gerlak, 2006). Consequently, states variably interpret and allocate the federal CWA Section 319 grants to local watershed groups for watershed-based planning to reduce NPS pollution.

Several scholars have assessed the product of this devolution, particularly the character, process and outcomes of the NPS programs and collaborative watershed groups. While their research shows decided difference in the watershed groups' composition, formalization, and water quality typology, the unifying component is the use of collaborative, place-based process to address watershed protection. And the efficacy of the collaborative approach—both in implementation of the watershed plans, and in the removal of the pollution load itself—is still in question. Arguably, trained planners' roles in this watershed planning would foster and maintain the collaborative process, quality plan generation, and its implementation (with horizontal consistency between land use and watershed plans). And yet, no one has directly examined the planner's role in the Section 319 watershed planning process.

As part of a larger, comparative study of Kansas, Ohio, and South Carolina to answer this question, this work focuses on South Carolina as a case study to address NPSs. The state is predominantly rural, with increasing urbanization high in the watershed and in the coastal zone. The primary NPS contaminant is bacterial (fecal coliform and *E. coli*), originating from both agricultural uses and heavy reliance on septic systems, which suggests that a watershed-based planning approach would be the most viable to address pollution.

The paper uses two data sources to examine the extent of SC planners' roles in the state's Section 319 planning. A survey administered through the state APA chapter in Summer 2014 revealed South Carolina planners' familiarity with water quality protection, TMDL setting, and 319-funded watershed-based planning, as well as the extent of their role in the latter. Its results are contrasted with those for the remainder of the states to reveal broader trends. Semi-structured interviews with the state 319 program coordinators ( $n = 3$ ) clarified the processes by which the state addresses NPS issues, following federal guidance, and perceived an appreciable impact on the few watershed-based plans in which planners played a role.

The results reveal a substantial absence, for the most part, of professional impetus for the planners' involvement in the local watershed planning process, which explains some of the outcome ambiguity noted in the existing collaborative process literature. It also identifies the impediments to planners' watershed planning participation in South Carolina, as compared to the broader set of states, and notes both the willingness and potential avenues for new planner participation in an integral nonpoint source control planning process.

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## 1. Introduction

Land use planning and water quality management have been traditionally separate, given their locus of authority, and local resistance to federal land use usurpation through the Clean Water Act (CWA). However, the need to address water quality via land use planning is increasingly evident, as nonpoint source (NPS) pollution is now the dominant obstacle in accomplishing the CWA's fishable and swimmable standards in U.S. surface waters. Despite the NPDES permits for point sources, quality attainment has been elusive, given the numerous and diffuse land use-based pollution sources. In response, the U.S. Environmental Protection Agency (EPA) adopted a new "total maximum daily load" (TMDL) rule in 2000 that focuses on the receiving water body itself, rather than controlling the contaminant at its source.

While this rule was being drafted, the water policy relationship between the federal government and states was shifting for a fifth time in the history of the country, devolving water quality implementation authority onto states and municipalities (Gerlak, 2006). "Today's water policy is highlighted by pragmatic federalism that (1) emphasizes collaborative partnerships, (2) relies on adaptable management strategies, and (3) is problem and process oriented" (Gerlak, 2006, 243). The result of this shift is a more minimal role for the EPA, while states set and implement water quality standards for stretches of their water bodies. If the water quality fails to meet federally approved standards, the stakeholders and the state agency must set a TMDL for each pollutant and list the impairment on the EPA's CWA Section 303(d) list. The states allocate and administer CWA Section 319 grants to local watershed groups for watershed-based planning to reduce nonpoint source (NPS) pollution. This delegation of authority introduces variation in water quality control both across and within states throughout the country.

Several scholars have assessed the character, process and outcomes of the NPS programs and collaborative watershed groups that emerged with the intergovernmental devolution (Hardy and Koontz, 2008; Hoornbeek et al., 2013; Sabatier et al., 2005). While their research shows decided difference in the watershed groups' composition, formalization, and water quality typology, the unifying component is the use of collaborative, place-based process to address watershed protection. This watershed approach addresses a land use that is otherwise exempt from the CWA: agricultural use, which is the greatest NPS contributor (followed by urban stormwater runoff). And the efficacy of the collaborative approach—both in implementation of the watershed plans, and in the removal of the pollution load itself—is still in question (Hardy and Koontz, 2008; Hoornbeek et al., 2013). Arguably, the watershed planning structure sidesteps the federalism concerns, and seems rife for a planning role that would foster and maintain the collaborative process, quality plan generation, and its implementation (with horizontal consistency between plans). Their work also demonstrates that there is questionable pollutant removal and watershed plan implementation effectiveness (Born and Genskow, 2001; Hardy and Koontz, 2008; Hoornbeek et al., 2013). These findings affirm those of planning scholars, who have shown that the absence of the planner has the potential to influence plan quality and its implementation in hazard mitigation (Burby et al., 1998; Lyles et al., 2014). To date, no one has directly studied the planner's role in the Section 319 watershed planning process.

Consequently, this article examines the role of the planner in the Section 319 watershed-based planning process in South Carolina, as part of a larger comparative study of planners' roles in watershed planning in Kansas, Ohio, and South Carolina. I ask whether they were present in the convergence of water quality, water supply, and land use planning, and how their presence—or absence—has impacted the planning process and resulting plan(s). This work is exploratory, more specifically examining the following questions:

- 1 To what extent—if at all—are planners participants in the Section 319 watershed-based planning process in South Carolina?
  - a If they are, what has caused this participation in their professional capacity (i.e., ordinances or legislation, enumerated job duties or exposure to water quality problems, the geographic typology in which they work, etc.)?
  - b If they are not, what are the impediments to their participation?
  - c How have they impacted the watershed-based planning process in South Carolina?
- 2 Are there similarities in participation (or lack thereof) across the states of Kansas, Ohio, and South Carolina?

### 1.1. Relevant literature

With the acceptance of climate change's considerable projected and actual hydrological impacts that are now converging with more standard issues of water quality improvement, there is a growing advocacy for linkage between the law guiding land use and water planning, as well as the actual planning process itself. In the legal field, scholars have argued that water law, land use law, and environmental law are merging—or at least influencing one another far more closely (Ruhl, 2010; Tarlock, 2011). The linkage in the planning literature logically follows, particularly with the need for supply assurance with rapid development in arid areas and those that are projected to experience deeper and more prolonged droughts (i.e., the U.S. Sunbelt states) (Hanak and Browne, 2006; *In re Tri-State Water Rights Litigation*, 2009; Intergovernmental Panel on Climate Change, 2014; Sabo et al., 2010). The quality impact is equally as concerning, particularly since the majority of the pollutant load in water bodies originates from nonpoint sources, rather than a discrete conveyance aka a point source.

This is largely because there are numerous and diffuse sources across a landscape, making it difficult to pinpoint any particular contributor at an established time (i.e., within a day, hour, minute). The problems are only increasing in complexity and subtlety; changing land use impacts water quality, just as reduction in water consumption reduces the runoff associated with lawns, pervious surfaces, car washes, etc. This substantiates the argument to combine water conservation, water quality controls, and land use controls into one approach. Crawford (2010) states that "comprehensive wastewater planning [should be] part of coordinated land use planning mediated by the federal government and conducted between and among local, state, and federal governments" (173). One of the logical ways to do so could come from state enabling laws that require consistency between the watershed-based plans that result from federally funded but state administered watershed-based planning processes, and state-mandated local comprehensive plans. Planning scholars have been developing modeling methodologies to compliment the proposed changes to the legal framework that merge these concepts, with sophisticated spatial interactions of runoff rates, land uses, and their physical location (Yeo and Guldmann, 2006). Taylor and Gerath (1996) argue that while the combination is logical, it is difficult to actually administer. The theoretical arguments and the modeling capacity are present, but the practical formalization has not yet occurred.

Formalizing through a single piece of legislation, such as the federal CWA, may not address the problems, despite advocacy to do so (Babbitt, 2007). Adler (2010) argues that "the real challenge, [ . . . ] is to adapt a law written primarily to address industrial water pollution into one that addresses the more subtle but ubiquitous problems of a post-industrial age" (161). Impediments to the combination can be attributed, in part, to federalism concerns. The U.S. Supreme Court expressed overt apprehension about federal control over land use through expansion of the CWA in the *Rapanos v. United States* case, suggesting that there is considerable social opposition to such action, particularly from local

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