

# THE SUCESSSESS AND CHALLANGES OF IMPLEMENTING SEDIMENT AND PATHOGEN TMDL's IN STEKOA CREEK

Dick L. Fowler, Jeff Duvall

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AUTHORS: Dick Fowler, Biological Scientist, Coweeta Hydrologic Laboratory, 3160 Coweeta Lab Road, Otto, NC 28763  
Jeff Duvall, Developer, Hwy. 441 South, Clayton, GA 30525

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**Abstract:** TMDL implementation in rural areas offers many challenges. Court ordered deadlines limit the science and quality of data used to establish these guidelines. Bureaucratic rules and laws imposed on rural citizens and local governments often confuse the issues and increase the difficulties of TMDL implementation at the local level. Locally lead involvement and participation in the process is the only way to ensure successful TMDL implementation.

**Introduction:** Stekoa Creek has its head waters in a small mountain community in Rabun County know as Mountain City. It runs south through the City of Clayton. At the southern end of the city limits it turns east where it eventually enters the Chattahoochee National Forest and makes it's confluence with the Wild and Scenic Chattooga River. The Chattooga River severs as the state line between Georgia and South Carolina. It was established by congress as a Wild and Scenic river in 1974 and is a popular recreational river for rafting, kayaking, and fishing. Interest in what happens to, and the condition of the Stekoa Creek watershed is keen because of its impact on the Chattooga River. Stekoa Creek is also one of the few streams that does not have its headwaters originating on National Forest.

Sixty three percent of Rabun County is National Forest. The northeast corner of the state was one of the last areas settled in Georgia in the late 1800's because of its mountainous location and natural barriers which limited access to it. These are important social factors for this community. What once took four hours to travel to the Chattooga River by car, can now be accessed by over 25 million people from Atlanta, Charlotte, Greenville, Asheville, and Chattanooga all within two hours driving time. Real-estate in Rabun County is at a premium, making for summer and weekend second homes for many that do not live in the county on a daily basis. Limited land area, a heavy influx of out of county land owners, and an influx of new residents to the county have

increased the social dynamic issues of implementing TMDL's in this rural community.

**Background:** Five streams in the Stekoa Creek Watershed were included on the State of Georgia's 1998 303(d) list because of biological and habitat impairment. The pollutant of concern was determined to be sediment. A February 2000 Order on Consent in the Georgia TMDL lawsuit imposed restrictive timeframes to propose and finalize certain TMDL's. A Stekoa Creek Watershed TMDL was developed to provide estimates of the watershed's sediment delivery. This delivery was expressed as an annual load of sediment from the watershed that potentially could reach the stream and gave the Stekoa Creek Watershed the dubious honor of being the first stream in Georgia with a TMDL established for it.

The sedimentation problem on Stekoa Creek was divided into two issues: 1) sediment loading coming from the watershed and 2) in stream sedimentation processes such as bank and stream bottom down cutting.

The final 1998 Section 303(d) list for Georgia also identified 14 miles of Stekoa Creek between Clayton and the confluence with the Chattooga River as not supporting its designated use as a fishing water, with the pollutant of concern being Fecal Coliform.

**Building a Functional Watershed Organization:** To succeed in TMDL implementation, a locally lead watershed organization needed to be established. A lot of confusion existed as to which governmental agencies, local state, and federal, were responsible for implementing and enforcing the TMDL's. How these agencies inter related in TMDL development and implementation was confusing to local leadership and citizens. A group of local community leaders from town, city and county governments, developers, forestry, recreation, agriculture, and environmental groups were

asked to an organizational meeting to see if the interest was there to form a working group to guide TMDL issues on Stekoa Creek. From those gathered, a steering committee was formed that represented a cross section of those present. One representative from each of the following interest made up the steering committee: Agriculture, Development, Recreation, Forestry, Local Government, and Environmental Concerns. This became known as the “**Stekoa Creek Group**”, each representative having equal input into decisions made by the “Group”.

Their first mission became to learn about the process of how the TMDL’s were established on Stekoa Creek, what each agency in the process was responsible for, how they were connected, and how they could now help in the process of meeting the TMDL established for sediment and pathogens. A series of speakers from the various agencies was brought in. A technical committee of agency representatives was established to help the group in setting priorities and direction. Individuals from the group also brought in representatives from their own interest to help each other learn about the challenges they faced in securing their interest in the Stekoa Creek Watershed.

**Successes:** Building on the Chattooga River Community Based Large Scale Watershed Restoration Project, initiated by the Forest Service in 2000, work began on sedimentation concerns, especially related to road sediment runoff. Erosion and sediment issues related to development were a high concern as were concerns from silvicultural and agricultural operations. The Stekoa Creek Group acted as sponsors for a section 319(h) grant through Georgia EPD that would write a proposal and project plan for a PL-566 Small Watershed Project through NRCS. PL-566 has been used by NRCS to help agricultural landowners solve resource issues through Long Term Contracts administered by NRCS. The Group also has sponsored stream clean ups for one of the local schools “Environmental Day”, providing some history and education on the issues facing Stekoa Creek and coordinating activities related to the stream cleanup with the City of Clayton, private landowners, and Forest Service.

The local community leadership has become more aware of their responsibilities to meet TMDL’s and which agency has responsibilities to guide them through the process.

**Challenges:** Change takes time. The TMDL issues in Stekoa Creek are real. Sediment in the Stekoa Creek watershed streams is evident. Most from the community

would not eat the fish caught from these streams, they know better. But the issues now faced by this rural and rapidly changing county will take time to correct; there is no quick, economical, fix. Private landowners do not have the capital necessary, or the incentive to correct stream erosion concerns. There are old, leaking and failed septic systems near the stream channels.

The city of Clayton’s sewer infrastructure is old. One economic study done on fecal contributions to Stekoa Creek revealed that the primary source of fecal coliform, was the city of Clayton’s sewer infrastructure, not agriculture, and could be corrected with less than 200,000 dollars. In theory the Stekoa Creek TMDL for fecal would be met and it could be removed from the states 303(d) list. Finding the funding for a project like this became a challenge. The city could get loans; paying them back was the problem.

Development in Clayton and on Stekoa Creek is on the increase. Educating developers and home owners to use approved BMP’s still a big concern.

**Conclusion:** TMDL compliance has a significant impact on small rural communities. Changing attitudes and opinions takes time. Local lead and driven community involvement and leadership is invaluable in helping to accomplish the ultimate goal of bringing a stream back to meeting its designated use. Local buy in and ownership to TMDL compliance is better received if built from the ground up.