

**Citizen's ACTION Guide to Watershed
Assessment and RESTORATION**

Prepared For:

The Citizens of Tennessee

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Dedication

I first met Ray Norris in 1989 when he was serving as the chair of the Environmental Council's water quality committee. I spent the next two years working with Dr. Norris as he implemented a state wide volunteer monitoring effort and tried to help his volunteers address pollution problems as they were encountered. It was this experience that was the genesis of this project.

Cecil Branstetter was a Nashville attorney who along with others in the early 1970's was a founding member of the Tennessee Environmental Council, board member and past president. Mr. Branstetter was quoted as saying "the world is changing; make sure that you are prepared to guide it". In helping start the Environmental Council, he was preparing citizens to guide the change. In using the Action Guide, it is hoped citizens, educator and others will feel empowered and prepared to guide the change that Mr. Branstetter referenced!

Finally, past, present and future staff at Tennessee Department of Environment and Conservation's Water Resources Division, and stormwater personnel across the state. While we may not always agree with these professional's they have a very hard line to walk between all the competing interests. They are at the front lines, day in and day out fighting the good fight for your and my clean drinking water. Let's give them some help!

Acknowledgements

A project of this magnitude is never carried out in a vacuum and so the authors would like to acknowledge the following individuals and groups for their participation in the project and for the mentor ships provided over time.

- TDEC's Karina Bynum is acknowledged for her feedback and editing the original manuscript and for her encouragement of Mr. Gregg and Dr. McFadden in establishing the need for the work.
- Dave Cour for his drafting of Appendix 1, Watershed Science and Mapping. This was no easy task in that he was the first real scientist we'd told we need to be written in non-science language and we wanted our citizens to be able to delineate a watershed without paying for any software.
- The TN Environmental Council's Board of Directors, staff and supporters are acknowledged for providing the structure under which a project, 20 plus years in the making such as this can be accomplished.
- Bill Phillips, Envision Ecology is acknowledged for his ongoing editing with "a razor's edge" to quote and feedback from him and for his continued work on this "dynamic" document. I believe we will see more from him in the future.

How to Use This Guide

The Citizen's *ACTION* Guide to Watershed Assessment and *RESTORATION* (Action Guide) is designed to be used by citizens, stormwater directors, and educators, youth groups such as scouts, church groups and any other group or individuals interested in clean water. The Council will continue to be available for training programs across the state and helping users take action.

The Action Guide provides a framework for non-water quality professionals and professionals to help their communities understand and implement constructive projects designed to address water quality and quantity issues. The Action Guide is broken down in to four sections, with eight appendices. Part I, An Introduction to Water Quality: What you need to know about Water Quality in Tennessee gives users a basic overview of the state's water quality law and designated uses, causes of pollution and why it is vitally important for citizens and educators and others to be involved. In addition Appendix 5 and 8 have information about the law and how to use it to restore clean water. Your basic knowledge associated with these laws is critical to being effective in working with your local communities.

Part II describes how you can become an expert in time by collecting your own data. This is as simple as taking a picture and getting it to the right person to collecting aquatic insect and water samples. Collecting you own water quality data and information makes you knowledgeable about your river or stream in a way that no one else understands and gives you first-hand knowledge about how to conserve and restore your watershed. Appendix 1, 2, and 4 cover basic watershed science and mapping, assessment method and guidance for educators, respectively. Regarding educators and stormwater professionals the guide provides a linkage for these two groups of professionals to work together on shared goals of education and restoration. Appendix 4 outlines an educational strategy where by students collect, process, and analyzes data in an effort to draw conclusions about their local stream's quality. These conclusions are then utilized by students to develop and implement projects (Appendix 3) to address issues and concerns their data may have raised.

Part III addresses how you can go about restoring your watershed and its streams. In addition Appendix 3 lists and gives you more specific guidance on projects you can take to restore your stream. These are project based ideas like building a rain gardens, and planting trees along creek banks. This section helps you figure out how to physically fix your stream. The data and information you collect during the assessment (Part II) will help you determine the right restoration actions to take for your stream. The Council, those listed in Table 3 and Appendix 5 will continue to be available to help you decide the correct action, as they all have a vested interest in clean water!

Part IV and Appendix 5 and 8 include guidance on how you can take action under state and federal law. Once you have completed your assessment work (Part II), and tried to apply the restoration techniques (Part III), but may not be having the level of success you'd like it may be time to look at more aggressive methods. While we don't suggest these right off the start line, they are sometimes necessary to correct a problem. These methods may require legal counsel and will almost always require counsel with knowledgeable organizations such as the Council, Sierra Club, and/or other non for profits who have gone down this road before. In any event, it's a last resort but sometimes necessary

The main thing you should know about how to use the Action Guide is just that; USE IT! You will become an expert on your watershed.

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