

# THE SOURCE Missouri Department of Natural Resources PROTECTOR

The Official Newsletter of the Missouri Source Water Protection Program

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## The Elephant in the Room

Every once in a while, and fortunately not often, we are reminded that it is quite foolish to take for granted the value and critical importance of safe, clean drinking water. In early 2014, residents in nine counties of West Virginia were bluntly reminded of this when their governor issued a statement not to use or drink their tap water. The water system had been contaminated by a chemical spill upstream from the system's primary drinking water intake on the Elk River, and it was not safe for as many as 300,000 individuals to use their tap water. Fear and anxiety spread quickly among those that had used the water earlier that day as bottled water stocks were quickly depleted at the local stores. Restaurants and schools had to close – even the routine functions of state government in the capital of Charleston had to pause. Books will likely be written about the event and the long-term consequences – economic setbacks and shaken public confidence (just to name a few), but the burning question in the minds of others throughout the nation is “could it happen here?”

This is not a question that most suppliers of drinking water want to be asked and the typical response begins with “Yes, but...” They are not, in their defense, dodging the question. They are simply trying to be honest while explaining



that the probability of such an event is very low (which is true). Despite the low probability, the events in West Virginia emphasize that there is always a risk. Additionally, and perhaps even more importantly, the incident calls upon us to re-evaluate the protective measures that we already have in place to re-assess where things might still go wrong.

Be assured that the Missouri Department of Natural Resources, along with other federal, state, county and local entities, has an excellent system in place to respond to environmental disasters and emergencies. Environmental Emergency Response staff is on duty around the clock to receive reports of spills or other environmental hazards – this is often the first step in a process that may, if needed, involve dozens of different agencies and other entities. This tried and tested system, however, does not replace the need for public water systems and the communities they serve to take extra precautions to protect the source of their drinking water. As always, I encourage you to explore what you and your community can do to achieve this goal – and do not hesitate to let us know how we can better help you do so. Thanks for reading and I hope you enjoy the third edition of The Source Protector: The Official Newsletter of the Missouri Source Water Protection Program!

*Kenneth P. Tomlin,  
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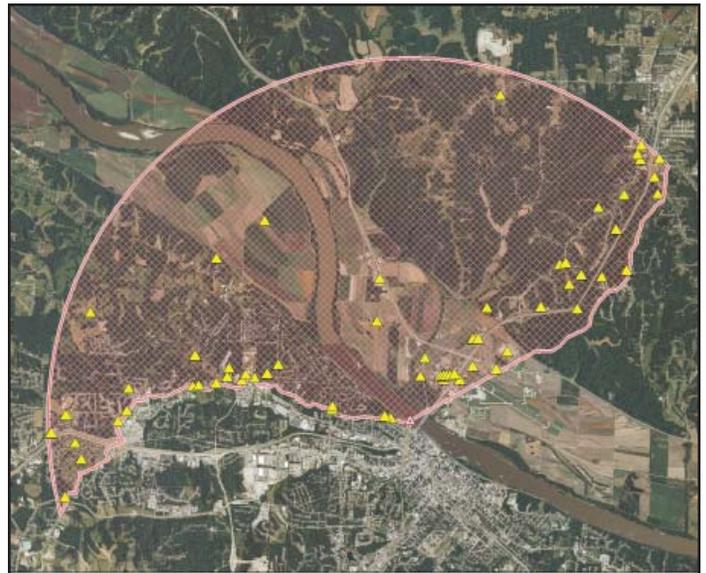
## Practical Source Water Protection: Introduction to Best Management Practices

Welcome to the second installment of our series on practical source water protection best management practices! Not unlike the focus of our first installment (information and education), this edition focuses on critical information that must be addressed in a comprehensive protection plan: potential contaminant inventories.

A big part of the battle in protecting drinking water sources from contamination is knowing, quite simply, what potential contaminants are around that might find a pathway into our surface or groundwater supplies. The key word to remember is ‘potential.’ There are plenty of obvious potential sources of contamination around – chemical or fuel storage facilities, major transportation networks or shipping lanes, waste or sewage lagoons and others. Unfortunately, the number of less-obvious potential sources of contamination is equal to or even greater than those that are obvious: nonpoint source pollution from runoff after a heavy rain, dilapidated or abandoned wells and cisterns, discarded containers or barrels used to store chemicals or waste (the list goes on). Whether a community is served from a groundwater source or a surface source, it is in its best interest to know what materials and substances are around that could impact its water supply.

*“... the number of less-obvious potential sources of contamination is equal to or even greater than those that are obvious...”*

The goal of producing a local potential contaminant inventory is not to eliminate these sites. Rather, the goal is to identify and document them so that effective strategies can be developed to prevent contamination. Whether those strategies involve zoning, land-use decisions, constructing physical barriers to contamination or even developing a



*Sample protection area delineation for a stream water source and potential contaminant sites.*

site-specific emergency response protocol (a nearby industrial chemical facility might be a good candidate for such a site-specific plan), the first step in managing the threat potential is to know where those threats lie and what risks they may pose. Armed with such knowledge, a water system is in the best position possible to respond quickly and appropriately to a contamination event to protect its infrastructure and the health of the greater community.

Once a comprehensive inventory of potential contaminants is assembled, the next step is to assess the actual threat of contamination posed by those sites. There may be hundreds or even thousands of potential contamination sites in your area – don’t be intimidated! Along with your local source water protection team, try to focus on the highest priority threats and address those first. It is also important to remember that it is not necessary to start from scratch – the Public Drinking Water Branch can provide a preliminary contaminant inventory for sites located near your source of drinking water upon request. All you have to do is ask!

## The Missouri Rural Water Association 2013 Source Water Protection Plan of the Year

The Missouri Department of Natural Resources congratulates Ed Young and the City of Laurie on receiving the Missouri Rural Water Association’s 2013 Source Water Plan of the Year award! Many communities across Missouri made tremendous progress with developing and implementing protection strategies during 2013, but the City of Laurie takes the honor for 2013 – keep up the great work!

## Financial Assistance Update

2013 was a busy year for the Missouri Source Water Protection Program. During the 2014 state fiscal year, more than \$511,000 was awarded to eligible public water systems towards the completion of 18 abandoned well plugging projects and 17 source water protection development and implementation projects. The allocation for the 2015 state fiscal year is not quite as robust as last year’s; however, I encourage you to contact the department’s Public Drinking Water Branch today to find out how to put these funds to work in your community!

## HIGHLIGHT: The Missouri River - Part 1

It is no stretch to suggest that the Missouri River is one of the most famous rivers in the world. Go to any library or bookstore and you can find plenty of reading material covering everything from the river's cultural, historical and geographical significance to the thousands of aquatic and terrestrial organisms that depend on the river simply to exist. From its headwaters in northern Montana, the 'Big Muddy' flows over 2,000 miles past three state capitols and serves as a natural boundary between parts of five states as it journeys towards its confluence with the Mississippi River near St. Louis. Serving as the defining geographical feature of the heartland, the river's influence touches almost every aspect of modern life – irrigation, recreation, transportation, commerce and, of course, drinking water.

*“Serving as the defining geographical feature of the heartland, the river's influence touches almost every aspect of modern life...”*

In Missouri alone, nearly 2.2 million individuals obtain drinking water that is drawn directly from the Missouri River prior to treatment. Including water systems that draw from the thick alluvial deposits along the banks of the river, this number rises to more than 2.66 million, or close to 43 percent of the entire population of Missouri!

The critical value of the Missouri River as a drinking water resource is obvious – but protecting and improving water quality within the river is a daunting task. The main stem of the Missouri River extends over 2,000 miles and has a corresponding drainage basin in excess of 500,000 square miles. Included within this drainage area are multiple metropolitan areas and hundreds of thousands of acres of farms and ranches. Communities and public water systems, when implementing source water protection practices, are encouraged to manage a protection area that is feasible to protect. With an area as large as the Missouri River basin, though, the efforts of one or even several communities may seem futile in terms of improving or preserving the river's overall water quality. Fortunately, the task does not lie with just one community – and the effort has already started.

Protecting the Missouri River as a drinking water source requires a degree of collaboration and cooperation that is arguably unprecedented. Given the range of stakeholders and interests with the river, in general, it is not likely that there will ever be one unique authority that can effectively protect and manage the river system alone. The path forward must involve the support of federal, state and local decision makers (along with the various agencies under their umbrella) – and the policies and directions that stem from these decisions can only succeed with support from the public at large. Public water systems that rely on the Missouri River to provide drinking water to their communities (whether they realize it or not) are on the front lines of this battle. Few entities have such a direct and obvious connection to the benefit of improved water quality in the Missouri River and to the behaviors and actions of individuals in their respective communities that directly impact that water quality.

Please come back and check out the second part of this special highlight in the next edition of the Source Protector! In part two we will summarize the collaborative efforts that have already taken place to protect the Missouri River and discuss many of the newest initiatives under way to build on these early successes. Additionally, Part two will describe what you and your community can do to be a part of the process!



*Drinking water treatment plant along the banks of the Missouri River*



*A barge pushes upstream on the Missouri River near Rocheport*



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For questions or comments about this newsletter or to contribute materials call 573-526-0269. Thank you for your interest in source water protection!

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