

Our Missouri Waters Lower Missouri River Watershed meeting

April 10, 2017 | Marthasville, MO

1. Overview of Our Missouri Waters

Aaron Young, Sustainability Planning Manager at East-West Gateway Council of Governments, provided an overview of the Our Missouri Waters (OMW) initiative. OMW is an initiative of the Department of Natural Resources (DNR) to better understand water resources issues at a watershed scale. It is intended to help bring people, sectors, industries and organizations together to discuss ways to manage activities that affect water quality in a watershed.

2. Overview of Missouri River Country

Chad Eggen, Executive Director of Boonslick Regional Planning Commission, provided an overview of Missouri River Country, an initiative to brand the region and promote economic development and tourism from Hermann, MO east to the confluence of the Missouri and Mississippi Rivers. The initiative started as Commerce and Conservation to talk about ways conserving agricultural land and the natural environment could contribute to increased commerce in the region. Missouri River Country is still in the process of formalizing its structure and role and there is the opportunity for it to also provide a forum to bring people together in the Missouri River watershed to discuss issues related to water quality.

3. Panel perspectives on wastewater treatment and water supply systems

Mayor of Marthasville, David Lange, explained the history of Marthasville's wastewater treatment system. It used to be a three cell lagoon system but then the town grew to a population of 1200 people and the system upgraded in 2004 to a lined and aerated system to handle 120,000 gallons per day. It processes approximately 90,000-95,000 gallons per day so it's not at capacity. It discharges to an unnamed tributary of Toque Creek that flows to the MO River. The MO Department of Natural Resources (DNR) tightened ammonia standards so the plant started to receive violation notices. They are in the process of moving the outfall to the MO River. It was suggested that DNR wants to mandate chlorination of the drinking water supply, though Mayor Lange believes the city has an adequate deep water well. The city is also trying to upgrade the water supply system to meet fire-fighting storage capacity requirements. Mayor Lange stated he understands the need for regulation to protect the health of people.

Matt Jaspering of Alliance Water Resources which manages the Public Water Supply District 2 spoke about the wastewater lagoon in Augusta, MO. In order to upgrade the facility, they are going to change to a mechanical plant to replace the lagoon. Matt stated he understands the changing regulations promulgated by DNR and that his organization promotes regionalization of systems to reduce costs. Alliance is looking at taking over Wright City system. All treatment systems are trying to deal with the same problem but with different solutions.

Jim Patton from Missouri Rural Water Association (MRWA) also promotes regionalization of treatment systems. MRWA provides technical assistance for small systems and has a GIS mapper to map everyone's system. They are a membership-based organization with close to 1000 members and cater to towns between 100-10,000 people. They provide training and hold conferences throughout the year. They believe they are a good conduit

between DNR and cities/wastewater treatment system operators. Jim reported that 90% of the state's wastewater treatment systems are out of compliance because of the changing regulations/standards. Jim suggested that the continuous incremental improvement to wastewater treatment systems to meet new standards is only marginally improving water quality and may not be worth the cost since a bigger contributor to water quality problems is agricultural practices. From his perspective, there is an uneven playing field between municipal operations and agricultural producers to attain water quality standards because municipal operators face more regulation but point-sources of pollution are less of a problem than non-point sources of pollution. The more common and problematic issues wastewater treatment systems incur are with infiltration and inflow (I & I) in the collection system, not the actual treatment system. He believes DNR should focus more effort on the I & I problems than the treatment system. DNR has started to focus on that by providing a grant to the city of Marthasville to do a sewer system study. Jim suggested that drinking water in MO north of I-70 is affected by agricultural practices and MO American Water confirmed that by mentioning they will soon have to treat their water supply for Atrazine. Lastly, Jim stated that the hypoxic zone in the Gulf of Mexico could be a threat to Midwest states because Gulf states may sue mid-west states for upstream pollution of nutrients. The solution to the water quality problem is cover crops and no till farming practices.

Michael Hartman from USDA Rural Development spoke about the USDA's water and wastewater program for engineers in towns under 10,000 people. They will help if a town is in violation of water quality regulations. USDA aims to keep sewer costs for communities below 2% of median family income. If a project will increase sewer rates to above 2%, the community is eligible for grants. Otherwise, a loan.

Some lake subdivisions have sewer rates up to \$100 per month. Rate increases are usually the starting point if a town hasn't had one in a while. The median household income in the Lower Missouri River watershed is a little higher than elsewhere. The USDA can offer \$30,000 grant for preliminary engineer study. They also want to push for regionalization of systems but have run into people against that idea. The USDA can put a package together about what rates a town could afford and can offer a grant/loan program (30% grant/ 70% loan). If a town is in violation of a permit, they can get a lower interest rate on the loan. Usually a loan is for 35 years to fix an existing system. Bonding authority has been an issue because small communities need to have enough bonding authority to provide security, otherwise projects can halt if bonds are not passed. USDA is usually considered a last resort lender if all other institutions have turned a town away.

Discussion

Discussion from those present centered on whether a watershed forum such as Missouri River Country could help address water quality issues coming from multiple sources and sectors such as urban runoff, wastewater treatment systems and agricultural runoff. One suggestion was whether a credit trading system could be set up so a larger plant that has more capacity to reduce pollutant loads could help offset the need for a smaller facility to upgrade, which could be costly, as long as water quality in the watershed could still be met. It was suggested this could work in theory but may not work in reality because who determines the value the credit is worth? Most people agreed bringing people together from across sectors into one forum would be very beneficial but there are still questions about how to do that.

4. Panel perspectives on on-site wastewater treatment systems

Wes Kelley is an inspector with Seven Oaks Inspection and spoke about how there is no one-size-fits-all approach to fixing septic systems because there are so many different types of systems. A typical septic systems

handles 300-600 gallons per day. He estimated 40% of homes in MO are on septic systems. Failing septic systems are defined by the state – failing means sewage has crossed property lines. There are health concerns with sewage that has come to the surface because a pet dog could roll around in it then kids pet the dog and put their hands in their mouths. He promotes the option to connect a home to a public district if that option is available and the septic system needs replacing. We suggested that MO does not recognize greywater treatment systems and that everything has to go through a centralized on-site system.

JoAnn Toerper from Boonslick Regional Planning Commission provided information about the septic system grant and loan program they administer on behalf of Missouri Association of Council of Governments and DNR. Most applications she receives are from people who have been served by the Health Department a notice of prosecution because their septic systems have failed. The program has helped a lot of scared homeowners who could be prosecuted but do not have \$20,000-\$30,000 to fix or replace their septic system. So far over 50 applications have been approved for a grant or loan. Boonslick RPC will try to get the grant or loan to cover the cost of hooking up a household to a nearby public sewer line if it is available. Currently the grant or loan does not cover that cost.

Discussion

Discussion from those present centered on what can be done to prevent homeowners from being in a dire position of having a failing septic system they cannot afford to fix. Suggestions included providing training to the new homeowner about the septic system during the closing on a house for sale. There were questions about whether a house could be sold if the septic system is broken. Some counties are stepping in when a house is for sale and but the septic system is broken. There is a problem in that people who move from urban areas to rural areas do not understand how septic systems work and education is required about what can or cannot be put into the system.

5. Water quality monitoring

Representatives from United States Geologic Survey (USGS) reported that their stream gage on the MO River in Hermann, MO has the capability to do continuous nitrate monitoring but they have just been notified that 49 of the stream gages they operate across the state have been defunded in the most recent state budget. As of June 30, those gages will be taken out. They suggest to check the website www.mo.water.usgs.gov to see if you are using one of the gages listed to be defunded. The gages are used by multiple groups of people such as campgrounds, wastewater treatment operators, canoe outfitters, emergency management officials, and national weather meteorologists to understand stream and river conditions. One gage costs approximately \$14,000 per year to operate and USGS is now searching for private and public partnerships to keep the gages operating. DNR funded the gages decades ago and USGS installed them. They have provided decades of water quality and hydrology data. USGS is looking for collective input from people about how they use the gages identified to be defunded.