

## **Legislative Water Commission- 2019 Legislative Recommendations:**

### **Drinking Water**

**June, 2018**

**DRAFT, for Discussion only, JRS**

The safety of our drinking water is one of the most critical, responsibilities of government. Safe drinking water has been key in some of the greatest public health achievements of the last half-century, including the dramatic reductions in disease and improvements in longevity.

The value of our water resources goes beyond even health and the health of our environment. Jobs and economic development also depend on communities having a reliable source of clean and safe water. The U. S Environmental Protection agency (EPA) estimates that, as a nation, we need to invest \$473 billion in the next 20 years for drinking water infrastructure needs. Investments in water systems not only provide assurances of continued delivery of safe drinking water, they are key to local economies. The Department of Commerce estimates that for each dollar of investment in the water and sewer industry, the increase in revenue that occurs in all industries is \$2.62 per year. Furthermore, adding water or sewer jobs creates nearly four jobs to the economy. In 2015, the EPA found that the national need for infrastructure upgrades had increased by 10 percent since 2011.

The Minnesota Department of Health (MDH) has delegated authority from the EPA to regulate approximately 6,900 public water-supply systems. That includes 961 community systems. Community systems include 729 municipal systems (towns or cities) and 232 systems that provide water to manufactured home parks, nursing homes, and treatment or correctional facilities. In addition, MDH regulates about 6,000 non-community systems that provide water to people in schools, lodging facilities, and businesses not connected to community systems.

At the same time, 21 percent of Minnesotans (1.2 million people) get drinking water from private wells. Private-well users are not afforded the same water-quality safeguards as people who get their water from public systems. While public water system operators make sure water is safe, private well users are responsible for making sure their water is safe to drink. The MDH Minnesota Well Code ensures that private wells are properly located and constructed. However, after wells are put into service, private well users are responsible for maintaining their well, testing wells, and treating the water when necessary. Since July 2013, Minnesota Department of Health (MDH) Well Management Program has received some funding from the Clean Water Fund to evaluate the occurrence and distribution of contaminants in private wells and to develop additional education and outreach to protect private well users.

#### **Threats to public and private sources of drinking water include point and non-point sources and natural and anthropogenic contaminants. These threats include:**

**Nitrate:** Nitrate sources include agricultural fertilizer and human and animal wastes. Infants who drink water with high levels of nitrate can become critically ill and develop methemoglobinemia. Other human illnesses are associated with elevated nitrate in drinking water. Nitrate is found naturally in very low concentrations in ground and surface water but is at higher concentrations in areas affected by human activities.

**Lead:** Lead is a well-known contaminant that has harmful health effects, especially for children. The greatest threat to children in Minnesota is the nearly one million homes in the state that contain lead paint. Water can be a smaller, but still important, source of lead.

**Arsenic:** Arsenic poses a health threat to people. Arsenic occurs naturally in our environment. As a natural component of underground rock and soil, arsenic works its way into groundwater. Groundwater in the west-central and northwestern parts of Minnesota tend to have higher concentrations of arsenic, although

arsenic can be found throughout a large part of the state. Arsenic exposure in water, over many years, can result in increased risks of skin damage or problems with circulatory system and an increased risk of cancer. **Radon:** Radon is a colorless, tasteless, odorless gas. It occurs naturally and is produced by the breakdown of uranium in soil, rock, and water. It can also dissolve into our water supply. Each year across the nation, 30 to 1,800 deaths are attributed to radon from household water.

**Contaminant Spills:** Protecting our drinking water starts by protecting the rivers, lakes, and groundwater that are our sources of drinking water. Threats to water supplies come from many places, including our current and past land uses, business and industrial activities, use of pharmaceuticals and personal care products. Accidents and chemical spills are rare, but results that can be devastating. Minneapolis, St Paul and St. Cloud all have surface-water intakes that would need to be closed in the event of an upstream spill.

**Pesticides and Industrial Contaminants:** The MDH conducts tests for pesticides and industrial contaminants in community water systems. So far, no systems have violated drinking water standards for these contaminants.

**Bacteriological Contamination:** So far in Minnesota, eleven community systems, including eight municipal systems have tested positive for bacteriological contamination (2014). All non-community water systems are monitored for bacteriological contamination. There were 199 violations among the nearly 6,000 non-community systems. These communities have worked with MDH staff to disinfect their systems and retest the water.

**Harmful Algal Blooms:** HABS occur when algae grow out of control and produce harmful effects on humans, wildlife, and ecosystems. Contaminants called cyanotoxins can be produced by cyanobacteria. People or pets who drink or swim in water with dangerous levels of HAB contamination may experience stomach illness, skin irritation, allergic responses and damage to the liver and nervous system. One of the most significant events the United States was in 2014 when the city of Toledo, Ohio, issued a “Do Not Drink” advisory to its 500,000 residents. To the best of our knowledge, Minnesota has not yet had any incidents of drinking water exceeding safe levels of HABS.

### **Recommendations and the Path Forward—Top 10 list.**

Minnesota’s water aquifers and rivers provide drinking water to millions of people. Residents rely on these systems for public health and environmental, recreational, and economic benefits. To sustain Minnesota’s future, we need to manage the state’s water resources wisely to protect and enhance their value, including maintaining and enhancing the viability of our drinking-water systems:

1. Continue to support, and increase support for **source-water protection** for groundwater. Initiate a source-water program for surface waters that are a source of drinking water. Prepare and implement emergency preparedness plans to respond to spills, storms, harmful algal blooms, and other disruptions.
2. Improve **monitoring, public information and education, and the mitigation** of contaminants in drinking water. Monitor and understand risks to private wells from land use activities and naturally occurring contaminants, and prepare strategies to reduce risks. Continue to support the County Geologic Atlas Program and add a water-budget analysis to the program.
3. **Increase investments in public-drinking water infrastructure** to meet treatment needs and repair and replace aging water mains and other facilities. Conduct an assessment of current infrastructure needs. Provide additional financial assistance to communities in need of replacing aging infrastructure.
4. Expand comprehensive real-time surface and groundwater **monitoring to detect potential threats** to water supplies, develop early responses, and provide public reporting.
5. **Identify the location and condition of Minnesota’s failing septic systems, sewers and storm-water infrastructure because the contaminate groundwater.** It is estimated that many of Minnesota’s million septic systems are failing but we do not have good information on that issue. Establish a uniform standard for septic system performance, inspections, or periodic maintenance.

6. Minnesota's water-related infrastructure is aging. Provide local governments and water utilities tools to inventory, assess, and strategically invest in water assets. **Compile and evaluate asset management plans** as part of a drinking water asset management plan. Identify and prioritize infrastructure elements with risks to public health, such as lead service line replacement. Identify and prioritize areas for targeted infrastructure replacement or upgrades.
7. **Implement the groundwater protection rule** to protect private drinking water wells.
8. **Increase the MDH drinking water hook-up fee.** Provide funding to complete condition assessments and the development of asset management plans for drinking water supply systems
9. **Pass legislation that allows local governments to adopt ordinances requiring homes and businesses to connect to community drinking-water systems when onsite wells fail.** Strengthen permitting requirements to allow community systems only where a municipal system connection is not available, cost effective, or environmentally necessary. Community systems should be adaptable to future increases in the number of users, demonstrate a financially supported asset management plan, and provide for eventual connection to a municipal system. Increase the financing mechanism such as a low-interest revolving loan fund or loan loss reserve program to support maintenance and replacement of existing on-site and community systems for system owners with a demonstrated need for financial assistance.
10. **Embrace new Technology:** Much of the infrastructure for drinking water was built between 50 and 100 years ago and utilizes outdated technology and approaches for treatment, distribution, and collection. Encourage ideas, partnerships, and cost-effective emerging technologies and materials that hold promise for more efficient water and energy use, recovery of resources (such as nutrients), and improvement of environmental and public health outcomes. Support innovation through partnerships and funding with universities to expand research programs in the drinking water. Support new and emerging cost-effective technologies (such as smart metering and loss management technology) through permitting requirements that integrate water utilities with innovative communication and energy networks.

