

Water Quality Standards Unit
Water Quality Standards Triennial Review 2019-2020

Reference and Recommendations
for
Waterbodies designated for Drinking Water Supply Use

Section 303(c)(1) of the Clean Water Act and the U.S. Environmental Protection Agency's (EPA's) implementing regulations at 40 CFR 131.20 require that states, from time to time, but at least once every three years, hold public hearings to review applicable water quality standards and, as appropriate, modify and adopt water quality standards. Water Protection Program's Water Quality Standards (WQS) Unit has compiled this Reference and Recommendations document to inform discussions and provide recommendations within the Program and with stakeholders during the WQS rulemaking process.

What are designated uses and why are they important?

Designated uses (a.k.a. beneficial uses) are the expectations and goals for how waterbodies are used. Designated uses are a critical component of WQS; each use is associated with water quality criteria that protect waterbodies for that use. Human health protection, recreation in and on water, and protection of fish, shellfish and wildlife are presumed uses that apply to all waterbodies (with some site-specific exceptions). Other uses, such as a drinking water supply (DWS), are designated on a case-by-case basis.

Drinking water supply (DWS): definition, water quality criteria, and effluent regulations

Drinking water supply use is defined in Missouri WQS at 10 CSR 20-7.031(1)(C)6 as "maintenance of a raw water supply which will yield potable water after treatment by public water treatment facilities." Numeric criteria for DWS use are provided in 10 CSR 20-7.031 Table A1, and narrative criteria in (4) and (5). Effluent Regulations at 10 CSR 20-7.015 (3)(C) prohibit discharge of domestic or industrial wastewater into watersheds of L1 classified lakes, which are used primarily for public drinking water supplies.

Number and types of DWS designated waterbodies

Designated uses for all classified waterbodies are identified in 10 CSR 20-7.031 Tables G and H. Missouri's current standards have 187 waterbodies designated for DWS use (Figs. 1 and 2). These include 123 lakes (Table G) and 64 streams or stream segments (Table H). Lakes are classified on the basis of primary uses and streams on the basis of streamflow.

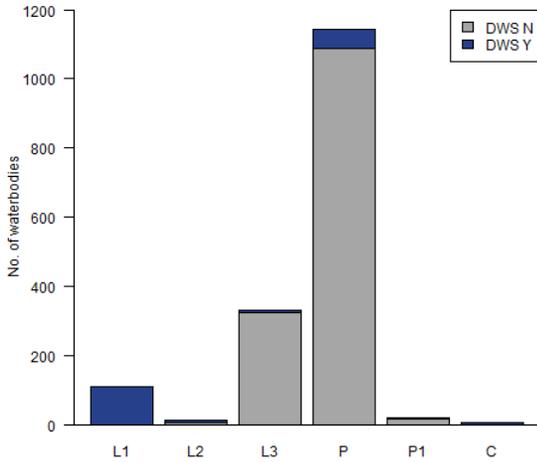


Figure 1. Number of waterbodies by class and the proportion of each that is designated DWS. Classes L1, L2 and L3 comprise waterbodies in *Table G – Lake Classification and Use Designation*. Classes P, P1 and C comprise waterbodies in *Table H – Stream Classification and Use Designation*.

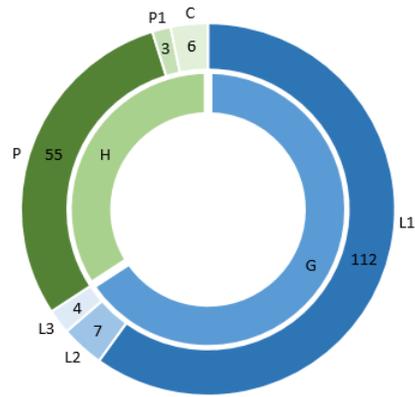


Figure 2. Current number (n = 187) and relative proportion of DWS waterbodies by class. Classes L1, L2 and L3 comprise waterbodies in *Table G – Lake Classification and Use Designation*. Classes P, P1 and C comprise waterbodies in *Table H – Stream Classification and Use Designation*.

Rulemaking History in Missouri

Throughout the history of Missouri WQS (1973 to present), DWS use designations have been assigned based on the current or planned use of a waterbody as a drinking water supply. Missouri WQS incorporated a lake classification convention in 1987 to categorize lakes by their primary use and management requirements:

- L1** for lakes primarily used to supply drinking water
- L2** for major reservoirs (our largest lakes)
- L3** for other lakes used by the public

Recommended Revisions to 10 CSR 20-7.031

The following are recommendations from the Water Protection Program’s WQS Unit and are meant to be used as a starting point for discussion.

There are five Table G waterbodies that contain active public drinking water intakes, but are not designated for DWS (see Table 1). We recommend classifying each of these waterbodies as an L1 lake and adding DWS as a designated use.

Table 1. Table G waterbodies that contain active public drinking water intakes and require L1 classification and DWS designation.

Waterbody ID	Class	Waterbody Name	Public Water Supply
7329	L3	Nims Lake	S-F Scout Ranch
7109	L3	New City Lake	Bethany
7218	L3	North Lake	Harrisonville
7154	L3	Unionville Reservoir	Unionville
7335	L3	Eagle Sky Lake	Eagle Sky of the Ozarks

There are seven Table H waterbodies that contain active public drinking water intakes, but are not designated for DWS (see Table 2). We recommend DWS be added as a designated use for these waterbodies.

Table 2. Table H waterbodies that contain active public drinking water intakes and require DWS designation.

Waterbody ID	Class	Waterbody Name	Public Water Supply(s)
508	P	Marrowbone Cr.	Hamilton
670	P	Mussel Fork	Bucklin, Marceline
1249	P	S. Grand R.	Cass Co. PWSD #7, Archie, Adrian
1299	P	Miami Cr.	Butler
1302	C	Miami Cr.	Bates Co. PWSD #2
1769	P	S. Fk. Saline Cr.	Perryville
2074	P	Big R.	Jefferson Co. PWSD #2

Finally, there are two Table G waterbodies for which we recommend DWS use be removed (Table 3). One of these is undergoing lake succession and the other has never and will not be used as a public drinking water supply.

Table 3. Table G waterbodies with DWS designation that do not contain intakes and should be evaluated for DWS removal.

Waterbody ID	Class	Waterbody Name	Reason for use removal
7048	L1	City Lake #2 – Perry	Lake succession
7444	L3	Prairie Home C.A. Lakes	Never used as DWS

Implementation of Recommended Revisions to 10 CSR 20-7.031

It is important to examine how the recommended WQS revisions will be implemented. The WQS Unit strives to be collaborative with our colleagues throughout the Water Protection Program; therefore, discussing how changes to WQS will impact their processes is key. Also, the first interaction that many members of the regulated community have with a WQS revision is often through an implementation action such as permitting.

Permitting

We do not expect these revisions to impact permittees. There are no permits for discharges within the watersheds of the lakes in Table 1. All permitted discharges (n = 25 outfalls) within the watersheds of the waterbodies in Table 2 are from minor domestic wastewater facilities (< 1 MGD). The pollutants for which DWS criteria are more stringent than other uses are rare in domestic wastewater, especially for minor facilities, and any impacts to facilities would be limited to site-specific cases.

Financial Impacts

Several financial analyses are required to be completed during the WQS rulemaking process. First, an environmental and economic impact evaluation must be conducted on a subbasin basis for any proposed WQS revision of 25% or more per Section 644.058, RSMo. Then, a Regulatory Impact Report (RIR) must be prepared for rulemakings that set environmental standards or conditions. The RIR will be open to public comment. Finally, fiscal notes must be created for both public and private entities if the aggregate cost associated with the rulemaking exceeds \$500.

Assessment

We do not expect these revisions to impact assessment.

Resources

For further information about Missouri's WQS, please visit our webpage: <https://dnr.mo.gov/env/wpp/wqstandards/index.html>. Updates on this WQS rulemaking can be found on our Water Protection Program Rule Development webpage: <https://dnr.mo.gov/env/wpp/rules/wpp-rule-dev.htm>. For specific questions about Missouri's WQS, you may contact the staff listed below or send an email to wqs@dnr.mo.gov.

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