

TRENDS ANALYSIS: DRINKING WATER QUALITY

FALL 2015



What does this measure & why is it important?

This indicator measures the number of Basin-Boundary drinking water systems for which health authorities (Interior Health and Northern Health) had issued a drinking water advisory as of June 10, 2015. Drinking water advisories (“Water Quality Advisories” or “Boil Water Notices”) are issued by health authorities when there is concern over the safety of the water supply. For this report, June 10 was selected as a sample date because of its correlation with spring freshet, which tends to affect turbidity (cloudiness) in surface water sources, potentially challenging the effectiveness of water treatment systems (Emelko, Silins, Bladon & Stone, 2011). The list of active water quality advisories was gathered from Interior Health’s [Water Notifications database](#). At the time of research, no water notifications were active for the portion of our region served by Northern Health.

The Basin-Boundary region has a high number of small water systems, many of which struggle to consistently meet regulatory guidelines for drinking water quality. There are several reasons for this challenge, including the affordability of modern treatment systems, aging infrastructure and increasingly stringent regulations. Access to clean, reliable drinking water is one of the most important factors affecting human health and the ability of rural regions to achieve their development goals (RDCK, 2010).

What are the trends & current conditions?

As of June 10, 2015, there were 153 drinking water advisories issued for 145 unique Basin-Boundary water systems. Compared to the same date in 2013, when 130 advisories had been issued for 123 water systems, there has been an increase in the number of active water advisories in our region. Despite these results, and Interior Health’s recent claim that one in six small southern interior water systems is on Boil Water Notice (Interior Health, 2014), only 4% of respondents to the RDI’s 2015 [Poll of Residents](#) stated that their community’s drinking water services do not meet their needs.

Inadequate disinfection or treatment (75 occurrences) and source water contamination (46 occurrences) were the causes associated with the greatest number of advisories (Figure 1). The former generally indicates that a system fails to meet the provincial government’s objectives for treatment of their water source, while the latter generally indicates that a system’s water quality tests have returned positive results for bacterial contamination. These two causes were also the most prevalent in 2013, when 57 notices were linked to inadequate disinfection or treatment, and 45 notices were linked to source water contamination.

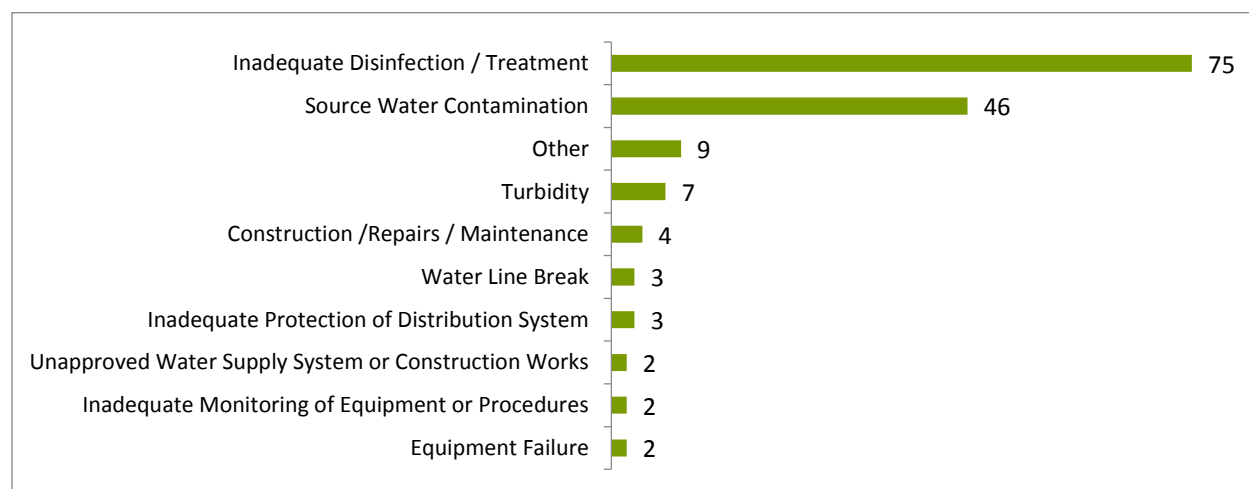


Figure 1: Cause for issuance of water quality notices in Basin-Boundary region, 2015
Source: Interior Health, 2015

The majority of notices (92) have been active for longer than 5 years, indicating a long-term concern with either a water system’s source or treatment infrastructure. The high prevalence of long-term water quality notices is a major driver of Interior Health’s significant focus on programs designed to reduce the number of Boil Water Notices in its service area (Interior Health, 2014).

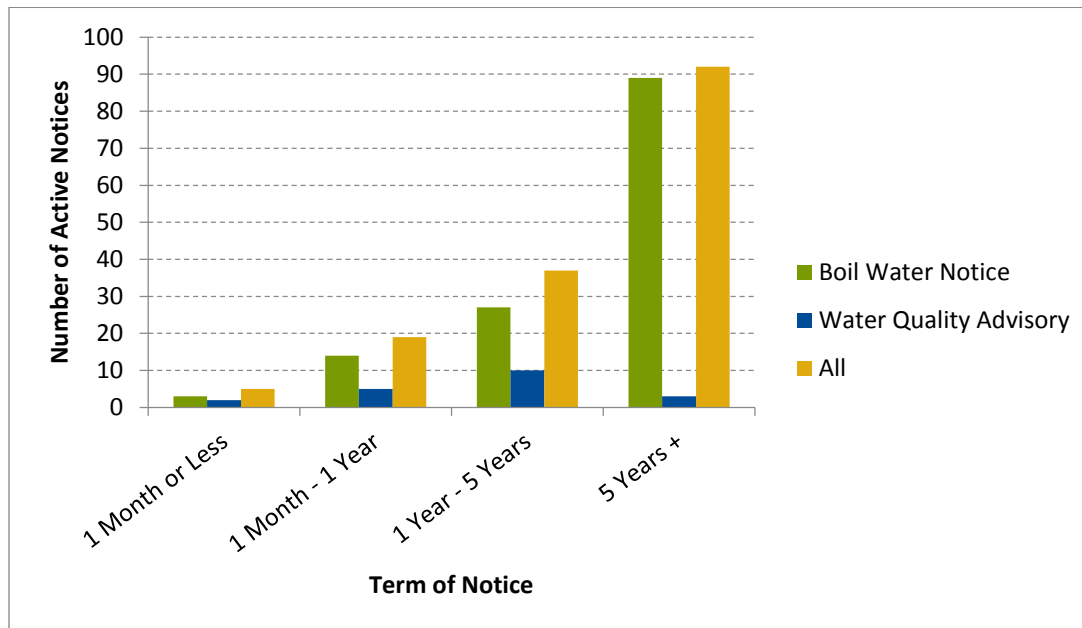


Figure 2: Length of term of water advisory, Basin-Boundary water systems, 2015

Source: Interior Health, 2015

References

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