

## 2020 ANNUAL REPORT TO VILLAGE OF NEILBURG CONSUMERS

For the reporting period of August 1, 2019 to July 31, 2020 we met all regulations governing the quality of the water both as it leaves the treatment plant and at the point of use as measured throughout the distribution system.

### TREATED WATER QUALITY

We are required, on a daily basis, to ensure our water leaving the treatment plant contains sufficient levels of disinfectant. This is measured as the Free Chlorine residual and the Total Chlorine residual. For each of these parameters 365 tests were required and 365 tests were performed with all results meeting or exceeding our required disinfectant levels.

We are also required to perform daily turbidity readings of the water leaving the plant and also of the water coming out of each filter. Turbidity is a measure of the degree to which the water loses its transparency due to the presence of suspended particulates. We are required to maintain turbidities of less than 1.0 NTU at each of these three test points. For each point, 365 tests were required and 365 tests were performed.

### DISTRIBUTED WATER QUALITY

Every two weeks we are required to sample the water coming out of our distribution system. Each time, two samples are taken. One for testing for disinfectant levels and the other is sent away for bacteriological testing.

During this period 24 samples were required and 29 samples were taken. Of these all 29 samples met or exceeded the required disinfectant levels and of the 29 samples sent away, none of them tested positive for bacteria.

### GENERAL CHEMICAL/ HEALTH AND TOXICITY

Every second year we are required to submit samples of our treated water for comprehensive testing at an accredited lab. This testing monitors levels of substances commonly found in water that can affect our health if present at concentrations above the levels considered to be safe. The testing also characterizes the compounds in the water that, although typically harmless, can reduce its aesthetic value. These compounds include hardness as well as ones that can give water an unpleasant taste, smell or colour. This testing was done in April 2019.

Although our water contains more minerals than we would like, as far as health concerns go, we have no harmful substances that exceed the regulated maximum allowable levels.

**CHEMICAL HEALTH ANALYSIS OF NEILBURG WATER SAMPLED APRIL 2019**

| Parameter  | Sample Result | SK Guideline | Parameter          | Sample Result | SK Guideline |
|--|---------------|--------------|--------------------|---------------|--------------|
| <b>Health and Toxicity Panel</b>                                 |               |              |                    |               |              |
| Boron  | 0.3 mg/L      | <5.0 mg/L    | Aluminum           | <6.96 µg/L    |              |
| Arsenic  | 0.90 µg/L     | <10 µg/L     | Barium             | 6.6 µg/L      | <1000 µg/L   |
| Cadmium  | <0.15 µg/L    | <5 µg/L      | Chromium           | 0.20 µg/L     | <50 µg/L     |
| Copper   | 24.6 µg/L     | <1000 µg/L   | Lead               | 0.10 µg/L     | <10 µg/L     |
| Selenium   | <1.13 µg/L    | <10 µg/L     | Uranium            | 0.40 µg/L     | <20 µg/L     |
| Zinc   | 4.6 µg/L      | <5000 µg/L   |                    |               |              |
| <b>General Chemistry/Water Quality Panel</b>                     |               |              |                    |               |              |
| Conductivity   | 1688 µS/cm    | <2300 µS/cm  | pH                 | 8.1           | 6.5 -9.0     |
| Total Alkalinity   | 505 mg/L      | <500 mg/L    | Phenol Alkalinity  | 0.00 mg/L     | no guideline |
| Bicarbonate  | 616 mg/L      | no guideline | Carbonate          | 0 mg/L        | no guideline |
| Hydroxide  | 0 mg/L        | no guideline | Chloride Dissolved | 14.6 mg/L     | <250 mg/L    |
| Fluoride Dissolved   | 0.20 mg/L     | <1.5 mg/L    | Nitrate Dissolved  | <0.2 mg/L     | <45 mg/L     |
| Sulfate Dissolved  | 490.5 mg/L    | <500 mg/L    | Calcium            | 201 mg/L      | no guideline |
| Magnesium  | 82 mg/L       | <200 mg/L    | Potassium          | 6 mg/L        | no guideline |
| Sodium   | 99 mg/L       | <300 mg/L    | Total Hardness     | 850 mg/L      | <800 mg/L    |
| T.D.S.   | 1536 mg/L     | <1500 mg/L   | *Iron              | 0.1 mg/L      | <0.3 mg/L    |
| *Manganese   | 0.01 mg/L     | <0.05 mg/L   |                    |               |              |
| *there are no regulations on allowable levels for these elements |               |              |                    |               |              |

More information on water quality and sample submission performance may be obtained from: Saskatchewan Environment's "Municipal Drinking Water Quality Monitoring Guidelines, November 2002, EPB 202" or from Health Canada at: <http://www.hc-sc.gc.ca>.

**Please Note:** Notifications of water service interruptions will be done as posters hung up throughout the village and/or a mail drop flyer and/or a Facebook post. Please check your mail and poster boards regularly.

**Water Hardness Note:** For setting your household water softeners our water hardness measures at 55 grains per US Gallon or 60 grains per Imperial Gallon. Check your softener manual and use the correct measurement.