

2020 Biennial Industrial Water Survey: Fossil-Fuel and Nuclear Electric Power Generating Plants

CONFIDENTIAL once completed.

Selon nos dossiers votre langue de préférence est l'anglais, si vous préférez recevoir ce document en français, veuillez nous appeler au numéro sans frais suivant : 1-866-445-4323 ou ATS 1-855-382-7745

This information is collected under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S-19.
COMPLETION OF THIS QUESTIONNAIRE IS A LEGAL REQUIREMENT UNDER THIS ACT.

Introduction

Survey purpose

Statistics Canada conducts this survey every two years to collect detailed information on water use by manufacturing, mining, and electrical power generating industries in Canada.

The survey will ask about the following for your plant:

- the sources of water
- the treatment of water before it's used
- the initial uses of water
- the recirculation and reuse of water
- the treatment of water before it's discharged
- the ultimate points of water discharge
- the monthly breakdown of water intake and discharge
- the costs of acquiring water, maintaining and operating the water systems, and discharging water.

This survey collects information that will help Canadians understand how industries use water across the country. The data are used to produce Statistics Canada's Physical flow account of Water Use in Canada, and Environment and

Climate Change Canada's water indicator: Water withdrawal and consumption by sector. Government and private sector analysts use the data to formulate water policies.

Your information may also be used by Statistics Canada for other statistical and research purposes.

Security of emails and faxes

Statistics Canada advises you that there could be a risk of disclosure during facsimile or email. However upon receipt, Statistics Canada will provide the guaranteed level of protection afforded all information collected under the authority of the *Statistics Act*.

Note: Our online questionnaires are secure, there is no risk of data interception when responding to Statistics Canada online surveys.

Confidentiality

The *Statistics Act* protects the confidentiality of information collected by Statistics Canada.

Please return the questionnaire within 28 days.

Please mail the completed questionnaire in the enclosed envelope or fax it to Statistics Canada at 1-888-883-7999.

If you are unable to complete within 28 days **OR** if you need help, call us at **1-866-445-4323** or **TTY 1-855-382-7745**.

Statistics Canada
Operations and Integration Division
150 Tunney's Pasture Driveway
Ottawa, Ontario K1A 0T6

Visit our website, www.statcan.gc.ca

Reporting instructions

- Please provide your best estimate when exact figures are not available.
- Please enter "0" in the corresponding box if the water volume is zero.

Business or organization and contact information

1. **Verify or provide** the business or organization's **legal and operating name** and correct where needed.

Note: Legal name modifications should only be done to correct a spelling error or typo.

Legal name

Operating name (if applicable)

2. **Verify or provide the contact information** of the designated business or organization **contact person** for this questionnaire and correct where needed.

Note: The designated contact person is the person who should receive this questionnaire. The designated contact person may not always be the one who actually completes the questionnaire.

First name

Last name

Title

Preferred language of communication

English

French

Mailing address (number and street)

City

Province, territory or state

Postal code or ZIP code

Example: A9A 9A9 or 12345-1234

Country

Email address

Example: user@example.gov.ca

Telephone number (including area code)

Example: 123-123-1234

Extension number
(if applicable)

Fax number (including area code)

Example: 123-123-1234

3. **Verify or provide the current operational status** of the business or organization identified by the legal and operating name above.

B00323

1 Operational → **Go to question 4**

2 Not currently operational

e.g., temporarily or permanently closed, change of ownership

Why is this business or organization not currently operational?

B00309

2 Seasonal operations → **Go to question 3a**

3 Ceased operations → **Go to question 3b**

4 Sold operations → **Go to question 3c**

5 Amalgamated with other businesses or organizations → **Go to question 3d**

6 Temporarily inactive but will re-open → **Go to question 3e**

7 No longer operating due to other reasons → **Go to question 3f**

3a. Seasonal operations

When did this business or organization close for the season?

Date B00217

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

When does this business or organization expect to resume operations?

Date B00218

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

 → **Go to question 4**

3b. Ceased operations

When did this business or organization cease operations?

Date B00211

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

Why did this business or organization cease operations?

B00311

1 Bankruptcy

2 Liquidation

3 Dissolution

4 Other
Specify the other reasons why the operations ceased

B00312

→ **Go to question 4**

3c. Sold operations

When was this business or organization sold?

B00212

	YYYY	MM	DD
Date	<input type="text"/>	<input type="text"/>	<input type="text"/>

What is the legal name of the buyer?

B00406

→ Go to question 4

3d. Amalgamated with other businesses or organizations

When did this business or organization amalgamate?

B00213

	YYYY	MM	DD
Date	<input type="text"/>	<input type="text"/>	<input type="text"/>

What is the legal name of the resulting or continuing business or organization?

B00407

What are the legal names of the other amalgamated businesses or organizations?

B00408

→ Go to question 4

3e. Temporarily inactive but will re-open

When did this business or organization become temporarily inactive?

B00214

	YYYY	MM	DD
Date	<input type="text"/>	<input type="text"/>	<input type="text"/>

When does this business or organization expect to resume operations?

B00215

	YYYY	MM	DD
Date	<input type="text"/>	<input type="text"/>	<input type="text"/>

Why is this business or organization temporarily inactive?

B00313

→ Go to question 4

3f. No longer operating due to other reasons

When did this business or organization cease operations?

B00216

	YYYY	MM	DD
Date	<input type="text"/>	<input type="text"/>	<input type="text"/>

Why did this business or organization cease operations?

B00314

For information only

4. **Verify or provide the current main activity** of the business or organization identified by the legal and operating name.

Note: The described activity was assigned using the North American Industry Classification System (NAICS).

B05002

1 This is the current main activity → **Go to next section**

2 This is **not** the current main activity
Provide a **brief but precise description** of this business or organization's **main activity**
e.g., breakfast cereal manufacturing, shoe store, software development

B05003

5. Was this business or organization's main activity ever classified as:

B05111

1 Yes

2 No → **Go to next section**

6. When did the main activity change?

Date B00219

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

For information only

General information

1. Was this plant **in operation at least one day** during the **2020** calendar year?

In operation **includes** plants that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam plants.

B00336

- 1 Yes



Which **months** was this plant **operational**?

Select all that apply.

B00336_tp13

All months

OR

B00336_tp1

January

B00336_tp2

February

B00336_tp3

March

B00336_tp4

April

B00336_tp5

May

B00336_tp6

June

B00336_tp7

July

B00336_tp8

August

B00336_tp9

September

B00336_tp10

October

B00336_tp11

November

B00336_tp12

December

- 2 No

2. Was the plant **specified below located in** during the **2020** calendar year?

If the plant was situated in more than one location during 2020 please **report** the province or territory for the **last location** of the plant in the 2020 calendar year.

This information is being confirmed to ensure the reported figures contribute to the correct provincial or territorial estimates.

B00122

- 1 Yes

- 2 No



In which **province or territory** was the plant **last located**?

Select all that apply.

B50039

01 Newfoundland and Labrador

02 Prince Edward Island

03 Nova Scotia

04 New Brunswick

05 Quebec

06 Ontario

07 Manitoba

08 Saskatchewan

09 Alberta

10 British Columbia

11 Yukon

12 Northwest Territories

13 Nunavut

3. In **2020**, what was the **average number of people** working on the premises of this plant in full-time equivalents (FTE)?

Include permanent, contract and casual employees that work on the premises.

Employment may be full-time or part-time, FTE converts part-time jobs to full-time jobs based on the hours worked. For example, if out of four employees employed at your plant one works full-time and the remaining three work the equivalent of half of a full time job, then FTE employment = $1 + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 2.5$.

When exact figures are not available, please provide your best estimate.

Number of people ^{B00337}

4. How many **days** did this plant **operate** in **2020**?

In operation **includes** plants that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam or pollution control.

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Days ^{B00338}

5. How many **weeks** did this plant **operate** in **2020**?

In operation **includes** plants that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam or pollution control.

When exact figures are not available, please provide your best estimate.

Weeks ^{B00339}

6. On average, how many **days per week** did this plant **operate** in **2020**?

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Days per week ⁰⁰³⁴¹

7. On average, how many **hours** did this plant **operate** in a day in **2020**?

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Hours ^{B00342}

Unit of measure

If you select a multiple of a unit of measure as your reporting unit, please take care to enter the correct decimal values or number of zeros when reporting water volumes in this questionnaire. **For example**, if thousands of imperial gallons is specified as the unit of measure, note that a reported quantity of 3.5 = 3,500 (3.5 thousand) imperial gallons, whereas a reported quantity of 3,500 = 3,500,000 (3.5 million) imperial gallons.

Please select only one unit of measure.

8. What **unit of measure** will be used to report **water volumes** throughout this questionnaire?

B00522

Cubic metres (M3)

- Tens of cubic metres (10 M3)
If you select "tens of cubic metres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 35 cubic metres.
- Thousands of cubic metres (1,000 M3)
If you select "thousands of cubic metres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 cubic metres.

Litres (L)

- Hectolitres (hL)
If you select "hectolitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 350 litres.
- Thousands of litres (1,000 L) or kilolitres (kL)
If you select "thousands of litres" or "kilolitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 litres.
- Millions of litres (1,000,000 L) or megalitres (ML)
If you select "millions of litres" or "megalitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500,000 litres.

Imperial gallons (imp. gal.)

- Thousands of US gallons (1,000 US gal.)
If you select "thousands of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 US gallons.

US gallons (US gal.)

- Thousands of US gallons (1,000 US gal.)
If you select "thousands of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 US gallons.
- Millions of US gallons (1,000,000 US gal.)
If you select "millions of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500,000 US gallons.
- Cubic feet (cu. ft.)

Water intake by source and type

9. Please report the **volume of intake water** for the following types and sources.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

2020
volume of intake water

► Freshwater

For the purpose of this survey, freshwater contains an average of 900 parts per million (ppm) or less of total dissolved solids.

a. Public utility
i.e., a publicly owned/operated (municipal, city or provincial) system of drawing, treating and distributing water

E79007_y1_sc1

b. Self-supplied surface water system
i.e., lake, river

E79007_y1_sc2

c. Self-supplied groundwater system
i.e., well, springs

E79007_y1_sc3

d. Other freshwater sources
e.g., delivery of water from a private supplier, an adjacent industry, rain water, run-off water
Exclude bottled water intended for personal consumption.

E79007_y1_sc90

Subtotal volume of freshwater intake in 2020

E79007_y1_sc100

► Saline or brackish water

For the purpose of this survey, saline or brackish water contains an average of more than 900 parts per million (ppm) of total dissolved solids.

a. Self-supplied groundwater system
i.e., well, spring

E79007_y2_sc3

b. Self-supplied tide water (salt water) body
i.e., estuary, bay, ocean

E79007_y2_sc4

c. Other saline or brackish water sources
e.g., delivery of water from a private supplier, an adjacent industry

E79007_y2_sc90

Subtotal volume of saline or brackish water intake in 2020

E79007_y2_sc100

Total volume of intake water in 2020

E79007_y100_sc100

Treatment of intake water

10. Please report the volume of **intake water treated** within this plant **prior to initial use** for the following methods of treatment.

Exclude the treatment of used water, waste water or effluent. If a given volume of water undergoes more than one treatment, please **report** the volume of water for each type of treatment.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

	2020 volume of intake water treated
<p>a. Screening The removal of larger pieces of solid matter from water using a screen barrier. Includes the bulk screening of intake water at the source.</p>	E79008_m1 <input type="text"/>
<p>b. Filtration The removal of smaller pieces of solid matter from water using a filter barrier.</p>	E79008_m2 <input type="text"/>
<p>c. Chlorination — disinfection The addition of chlorine or other disinfectants to water.</p>	E79008_m3 <input type="text"/>
<p>d. Corrosion and slime control Includes the control of scale, corrosion, biological growth and sludge.</p>	E79008_m4 <input type="text"/>
<p>e. Alkalinity control The chemical treatment of water to attain required pH level.</p>	E79008_m5 <input type="text"/>
<p>f. Hardness or water softening The removal of calcium and magnesium from water to reduce hardness.</p>	E79008_m6 <input type="text"/>
<p>g. Coagulation or flocculation The absorption of particles in order to easily remove them from water.</p>	E79008_m7 <input type="text"/>
<p>h. Other category of treatment — Item 1 Other treatments include electrolysis, de-salination, etc. E79007</p>	E79008_m91 <input type="text"/>
<p>i. Other category of treatment — Item 2 Other treatments include electrolysis, de-salination, etc. E79007</p>	E79008_m92 <input type="text"/>
<p>j. Other category of treatment — Item 3 Other treatments include electrolysis, de-salination, etc. E79007</p>	E79008_m93 <input type="text"/>

Water intake by initial use

11. Please report the **volumes of intake water by initial use.**

Exclude recirculated or reused water, *i.e.*, water that **leaves** a particular sub-system and **re-enters** it or is **used in another** sub-system.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

**2020
volume of intake water
by use**

a. Cooling, condensing and steam

i.e., water which does not come in direct contact with the products, materials or by-products of the processing operation

Include:

- pass-through water used in the operation of cooling or process equipment (including air conditioning)
- water introduced into boilers for the production of steam for either process operations or electric power.

E79009_dt2

b. Pollution control

i.e., any process that inhibits or reduces the production of pollutants during the course of power generation

e.g., wet flu gas de-sulphurization

E79009_dt3

c. Sanitary service or domestic use

i.e., water used for toilets, janitorial services, lawn watering, washing vehicles

E79009_dt4

d. Other purpose or use — Item 1

Exclude water pumped by the plant and intended for initial use outside the plant.

E79009_dt91

e. Other purpose or use — Item 2

Exclude water pumped by the plant and intended for initial use outside the plant.

E79009_dt92

f. Other purpose or use — Item 3

Exclude water pumped by the plant and intended for initial use outside the plant.

E79009_dt93

Total volume of intake water by initial use in 2020

The sum of the intake water should equal the amount reported at question 9.

E79009_dt100

Water recirculation or reuse by purpose

12. Please report the **volumes of water recirculated or reused** by purpose. Every time a volume of water is recirculated or reused it should be counted.

Recirculated or reused water refers to water **used more than once** in your plant. It is water that **leaves** a sub-system and is then recirculated or reused in the same sub-system, or **used in a different** sub-system. It does not refer to water that circulates many times within the same sub-system **i.e.**, it **excludes** closed-loop systems.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

**2020
volume of water
recirculated or reused**

a. Cooling, condensing and steam

i.e., water which does not come in direct contact with the products, materials or by-products of the processing operation

Include:

- pass-through water used in the operation of cooling or process equipment (including air conditioning)
- water introduced into boilers for the production of steam for either process operations or electric power.

E79011_dt2

b. Pollution control

i.e., any process that inhibits or reduces the production of pollutants during the course of power generation

e.g., wet flu gas de-sulphurization

E79011_dt3

E79011_dt90

c. Other purpose or use

E79011_dt100

Total volume of water recirculated or reused in 2020

For information only

Treatment of discharge water

13. Please report the volumes of water according to their **final point of discharge** and **most advanced treatment** process used at this plant.

For water that is subjected to more than one type (primary, secondary or tertiary) of treatment in preparation for discharge, please report those volumes only at the most advanced treatment process that is applied; in other words, please do not double-report treated water volumes.

Treatment type:

- **no treatment:** the water that is discharged without treatment after use
- **primary / mechanical treatment:** the physical removal of large suspended, floating and precipitated solids from untreated wastewater using grates, screens and/or settling tanks
- **secondary / biological treatment:** the removal or reduction of effluent contaminants from primary wastewater treatment through the promotion of bacterial growth and other microbes that break down organic waste
- **tertiary / advanced treatment:** advanced cleaning of wastewater that goes beyond the secondary or biological stage, removing nutrients such as phosphorus, nitrogen, and most BOD and suspended solids through biological or chemical processes.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

	No treatment	Primary or mechanical	Secondary or biological	Tertiary or advanced
a. Public sewage system	E79012_m8_sc1 <input type="text"/>	E79012_m9_sc1 <input type="text"/>	E79012_m10_sc1 <input type="text"/>	E79012_m11_sc1 <input type="text"/>
b. Surface freshwater bodies	E79012_m8_sc5 <input type="text"/>	E79012_m9_sc5 <input type="text"/>	E79012_m10_sc5 <input type="text"/>	E79012_m11_sc5 <input type="text"/>
c. Tide water (ocean)	E79012_m8_sc4 <input type="text"/>	E79012_m9_sc4 <input type="text"/>	E79012_m10_sc4 <input type="text"/>	E79012_m11_sc4 <input type="text"/>
d. Groundwater	E79012_m8_sc3 <input type="text"/>	E79012_m9_sc3 <input type="text"/>	E79012_m10_sc3 <input type="text"/>	E79012_m11_sc3 <input type="text"/>
e. Other point of discharge	E79012_m8_sc90 <input type="text"/>	E79012_m9_sc90 <input type="text"/>	E79012_m10_sc90 <input type="text"/>	E79012_m11_sc90 <input type="text"/>
Subtotal volume of discharge water	E79012_m8_sc100 <input type="text"/>	E79012_m9_sc100 <input type="text"/>	E79012_m10_sc100 <input type="text"/>	E79012_m11_sc100 <input type="text"/>
Total volume of discharge water in 2020				E79012_m100_sc100 <input type="text"/>

Monthly water intake and discharge

14. In **2020**, what was the monthly water intake and discharge for this plant?

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

	Volume of water intake	Volume of water discharge
a. January	E79007_tp1 <input type="text"/>	E79012_tp1 <input type="text"/>
b. February	E79007_tp2 <input type="text"/>	E79012_tp2 <input type="text"/>
c. March	E79007_tp3 <input type="text"/>	E79012_tp3 <input type="text"/>
d. April	E79007_tp4 <input type="text"/>	E79012_tp4 <input type="text"/>
e. May	E79007_tp5 <input type="text"/>	E79012_tp5 <input type="text"/>
f. June	E79007_tp6 <input type="text"/>	E79012_tp6 <input type="text"/>
g. July	E79007_tp7 <input type="text"/>	E79012_tp7 <input type="text"/>
h. August	E79007_tp8 <input type="text"/>	E79012_tp8 <input type="text"/>
i. September	E79007_tp9 <input type="text"/>	E79012_tp9 <input type="text"/>
j. October	E79007_tp10 <input type="text"/>	E79012_tp10 <input type="text"/>
k. November	E79007_tp11 <input type="text"/>	E79012_tp11 <input type="text"/>
l. December	E79007_tp12 <input type="text"/>	E79012_tp12 <input type="text"/>
Total volume in 2020	E79007_tp100 <input type="text"/>	E79012_tp100 <input type="text"/>

15. If the **total discharge volume** is **greater** than the **total intake volume**, please indicate the **reasons**.

B00343

Reason

Water acquisition costs

16. Please report this plant's **2020** water acquisition costs.

When exact figures are not available, please provide your best estimate.

**2020
cost in CAN\$**

a. Payment to public utility

Report cost for water volume reported at question 11.

If possible **include** only the portion paid for water and **exclude** sewer charges.

F62551_sr1

\$.00

b. Annual intake licences, permits and royalties

Please **report** the annual cost of intake licences, permits and royalties.

If not purchased annually, please provide the pro-rated cost.

F62551_sr2

\$.00

c. Payment for purchase of water from another operator and/or industrial supplier

F62551_sr3

\$.00

17. Does the payment to a public utility reported at question 16 include a **sewer surcharge**?

If no **sewer surcharge** was reported please select "Not applicable".

Sewer surcharge refers to the payment to a public utility for the ongoing maintenance and operation of sewer infrastructure and the treatment and discharge of water to a public sewage system.

B00523

- 1 Yes
2 No
3 Not applicable

20

Water operating and maintenance costs

18. Please report the total **2020** operating and maintenance cost for this plant's water systems.

Include the material, labour and energy costs incurred to operate and maintain your water systems.

Consider the systems at your plant which:

- **bring in** water
- **treat intake** water
- **recirculate and reuse** water
- **treat discharge** water

When exact figures are not available, please provide your best estimate.

Total cost in CAN\$

F61083_v100

\$.00

19. Of the reported costs at question 18, what were the **2020 operating and maintenance costs** for the following water systems?

When exact figures are not available, please provide your best estimate.

2020 cost in CAN\$

a. Intake water acquisition

Include the material, labour and energy costs incurred to operate and maintain the systems that bring water into your plant.

F61083_v1

\$.00

b. Intake water treatment

Include the material, labour and energy costs incurred to operate and maintain the systems to treat water brought into your plant.

F61083_v2

\$.00

c. Water recirculation and reuse

Include the material, labour and energy costs incurred to operate and maintain the systems to recirculate and reuse water in your plant.

F61083_v3

\$.00

d. Discharge water treatment

Include the material, labour and energy costs incurred to operate and maintain the systems to treat water discharged by your plant.

F61083_v4

\$.00

Total operating and maintenance costs in 2020

F61083_v100PF1

\$.00

Other details

20. In **2020**, what were this plant's **capital expenditures** on water intake, discharge or treatment facilities?

Include all relevant outlays for machinery and equipment purchases, and their installation, as well as for construction related to water intake, discharge and treatment **i.e.**, called capital outlay or capital expense.

Exclude operating and maintenance costs.

For example, the most common capital expenditures **include**:

- purchase and/or installation of new equipment
- purchase of new machinery or transportation equipment
- creation of new well or ground water installation.

When exact figures are not available, please provide your best estimate.

Capital expenditures in CAN\$

F80134

\$.00

21. Which of the following goods, technologies and services were purchased related to water management and efficiency (including water recirculation and reuse) by this establishment during the **2020** fiscal year?

Select all that apply.

Goods and technologies

B05349_y24_p331

Software for measurement and control of water use

B05349_y24_p332

Platforms or systems for measurement and control of water use

B05349_y24_p333

Sensors for measurement and control of water use

B05349_y24_p89

Greywater reuse systems

B05349_y24_p334

Equipment to reduce water consumption

B05349_y24_p83

Water desalination equipment

B05349_y24_p336

Rainwater collection equipment

B05349_y24_p305

All other water management and efficiency goods and technologies

Specify other water management and efficiency goods and technologies

B05349_y24_p306

OR

B05349_y24_p341

None of the above

Services

B05351_y24_p299

Planning and design services

B05351_y24_p300

Efficiency consulting services

B05351_y24_p337

Laboratory service

B05351_y24_p302

Pipe inspection services

B05351_y24_p301

Piloting, validation and verification services

B05351_y24_p303

Training and plant operation services

B05351_y24_p305

Augmentation ou diminution de la demande du marché

B05351_y24_p306

All other water management and efficiency services

Specify other services related to water management and efficiency

B05349_y24_p306

OR

B05351_y24_p341

None of the above

For information only

22. In **2020**, what was the **gross electrical generation capacity** of this plant?

i.e., the maximum power capability of the generating system or system capacity.

MW

B11003

Changes or events

23. Please provide a **brief, precise description** of any changes or events that affected the reported water or cost values for this plant, compared with the last reporting period.

e.g., expansion, temporary shutdown, closures, changes to water monitoring or the production process

Describe these changes or events

For information only

Contact person

24. Statistics Canada may need to contact the person who completed this questionnaire for further information.

If the contact person is the same as on cover page, please check → **Go to "Feedback"**

Otherwise, who is the **best person to contact** about this questionnaire?

First name

Last name

Title

Email address (Example: user@example.gov.ca)

Telephone number (including area code)

Example: 123-123-1234

Extension number
(if applicable)

Fax number (including area code)

Example: 123-123-1234

Feedback

25. How long did it take to complete this questionnaire?

Hours

Minutes

Include the time spent gathering the necessary information.....

26. We invite your comments about this questionnaire.

B00002

General Information

Confidentiality

Your answers are confidential.

Statistics Canada is prohibited by law from releasing any information it collects which could identify any person, business, or organization, unless consent has been given by the respondent or as permitted by the *Statistics Act*. Statistics Canada will use the information from this survey for statistical purposes.

Data-sharing agreements

To reduce respondent burden, Statistics Canada has entered into data sharing agreements with provincial and territorial statistical agencies and other government organizations, which have agreed to keep the data confidential and use them only for statistical purposes. Statistics Canada will only share data from this survey with those organizations that have demonstrated a requirement to use the data.

Section 11 of the *Statistics Act* provides for the sharing of information with provincial and territorial statistical agencies that meet certain conditions. These agencies must have the legislative authority to collect the same information, on a mandatory basis, and the legislation must provide substantially the same provisions for confidentiality and penalties for disclosure of confidential information as the *Statistics Act*. Because these agencies have the legal authority to compel businesses to provide the same information, consent is not requested and businesses may not object to the sharing of the data.

For this survey, there are **Section 11** agreements with the provincial and territorial statistical agencies of Newfoundland and Labrador, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, and the Yukon. The shared data will be limited to information pertaining to business establishments located within the jurisdiction of the respective province or territory.

Section 12 of the *Statistics Act* provides for the sharing of information with federal, provincial or territorial government organizations.

Under **Section 12**, you may refuse to share your information with any of these organizations by writing a letter of objection to the Chief Statistician, specifying the organizations with which you do not want Statistics Canada to share your data and mailing it to the following address:

Chief Statistician of Canada
Statistics Canada
Attention of Director, Enterprise Statistics Division
150 Tunney's Pasture Driveway
Ottawa, Ontario
K1A 0T6.

You may also contact us by email at statcan.esd-helpdesk-dse-bureaudepannage.statcan@canada.ca or by fax at 613-951-6583.

For this survey, there are **Section 12** agreements with the statistical agencies of Prince Edward Island, the Northwest Territories and Nunavut as well as with Environment Canada.

For agreements with provincial and territorial government organizations, the shared data will be limited to information pertaining to business establishments located within the jurisdiction of the respective province or territory.

Record linkages

To enhance the data from this survey and to minimize the reporting burden, Statistics Canada may combine it with information from other surveys or from administrative sources.

**Thank you for completing this questionnaire.
Please retain a copy for your records.
Visit our website, www.statcan.gc.ca**

2020 Biennial Industrial Water Survey: Manufacturing Industries

CONFIDENTIAL once completed.

Selon nos dossiers votre langue de préférence est l'anglais, si vous préférez recevoir ce document en français, veuillez nous appeler au numéro sans frais suivant : 1-866-445-4323 ou ATS 1-855-382-7745

This information is collected under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S-19.
COMPLETION OF THIS QUESTIONNAIRE IS A LEGAL REQUIREMENT UNDER THIS ACT.

Introduction

Survey purpose

Statistics Canada conducts this survey every two years to collect detailed information on water use by manufacturing, mining, and electrical power generating industries in Canada.

The survey will ask about the following for your facility:

- the sources of water
- the treatment of water before it's used
- the initial uses of water
- the recirculation and reuse of water
- the treatment of water before it's discharged
- the ultimate points of water discharge
- the monthly breakdown of water intake and discharge
- the costs of acquiring water, maintaining and operating the water systems, and discharging water.

This survey collects information that will help Canadians understand how industries use water across the country. The data are used to produce Statistics Canada's Physical

flow account of Water Use in Canada, and Environment and Climate Change Canada's water indicator: Water withdrawal and consumption by sector. Government and private sector analysts use the data to formulate water policies.

Your information may also be used by Statistics Canada for other statistical and research purposes.

Security of emails and faxes

Statistics Canada advises you that there could be a risk of disclosure during facsimile or email. However upon receipt, Statistics Canada will provide the guaranteed level of protection afforded all information collected under the authority of the *Statistics Act*.

Note: Our online questionnaires are secure, there is no risk of data interception when responding to Statistics Canada online surveys.

Confidentiality

The *Statistics Act* protects the confidentiality of information collected by Statistics Canada.

Please return the questionnaire within 28 days.

**Please mail the completed questionnaire in the enclosed envelope
or fax it to Statistics Canada at 1-888-883-7999.**

If you are unable to complete within 28 days **OR** if you need help,
call us at **1-866-445-4323** or **TTY 1-855-382-7745**.

Statistics Canada
Operations and Integration Division
150 Tunney's Pasture Driveway
Ottawa, Ontario K1A 0T6

Visit our website, www.statcan.gc.ca

Reporting instructions

- Please provide your best estimate when exact figures are not available.
- Please enter "0" in the corresponding box if the water volume is zero.

Business or organization and contact information

1. **Verify or provide** the business or organization's **legal and operating name** and correct where needed.

Note: Legal name modifications should only be done to correct a spelling error or typo.

Legal name

Operating name (if applicable)

2. **Verify or provide the contact information** of the designated business or organization **contact person** for this questionnaire and correct where needed.

Note: The designated contact person is the person who should receive this questionnaire. The designated contact person may not always be the one who actually completes the questionnaire.

First name

Last name

Title

Preferred language of communication

English

French

Mailing address (number and street)

City

Province, territory or state

Postal code or ZIP code

Example: A9A 9A9 or 12345-1234

Country

Email address

Example: user@example.gov.ca

Telephone number (including area code)

Example: 123-123-1234

Extension number
(if applicable)

Fax number (including area code)

Example: 123-123-1234

3. **Verify or provide the current operational status** of the business or organization identified by the legal and operating name above.

B00323

1 Operational → **Go to question 4**

2 Not currently operational

e.g., temporarily or permanently closed, change of ownership

Why is this business or organization not currently operational?

B00309

2 Seasonal operations → **Go to question 3a**

3 Ceased operations → **Go to question 3b**

4 Sold operations → **Go to question 3c**

5 Amalgamated with other businesses or organizations → **Go to question 3d**

6 Temporarily inactive but will re-open → **Go to question 3e**

7 No longer operating due to other reasons → **Go to question 3f**

3a. Seasonal operations

When did this business or organization close for the season?

Date B00217

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

When does this business or organization expect to resume operations?

Date B00218

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

 → **Go to question 4**

3b. Ceased operations

When did this business or organization cease operations?

Date B00211

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

Why did this business or organization cease operations?

B00311

1 Bankruptcy

2 Liquidation

3 Dissolution

4 Other
Specify the other reasons why the operations ceased

B00312

→ **Go to question 4**

3c. Sold operations

When was this business or organization sold?

YYYY MM DD
B00212

Date

What is the legal name of the buyer?

B00406

→ Go to question 4

3d. Amalgamated with other businesses or organizations

When did this business or organization amalgamate?

YYYY MM DD
B00213

Date

What is the legal name of the resulting or continuing business or organization?

B00407

What are the legal names of the other amalgamated businesses or organizations?

B00408

→ Go to question 4

3e. Temporarily inactive but will re-open

When did this business or organization become temporarily inactive?

YYYY MM DD
B00214

Date

When does this business or organization expect to resume operations?

YYYY MM DD
B00215

Date

Why is this business or organization temporarily inactive?

B00313

→ Go to question 4

3f. No longer operating due to other reasons

When did this business or organization cease operations?

YYYY MM DD
B00216

Date

Why did this business or organization cease operations?

B00314

4. **Verify or provide the current main activity** of the business or organization identified by the legal and operating name.

Note: The described activity was assigned using the North American Industry Classification System (NAICS).

B05002

1 This is the current main activity → **Go to next section**

2 This is **not** the current main activity
Provide a **brief but precise description** of this business or organization's **main activity**
e.g., breakfast cereal manufacturing, shoe store, software development

B05003

5. Was this business or organization's main activity ever classified as:

B05111

1 Yes

2 No → **Go to next section**

6. When did the main activity change?

Date B00219

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

For information only

General information

1. Was this facility **in operation at least one day** during the **2020** calendar year?

In operation **includes** facilities that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam or process water.

B00336

- 1 Yes



Which **months** was this facility **operational**?

Select all that apply.

B00336_tp13

All months

OR

B00336_tp1

January

B00336_tp5

May

B00336_tp9

September

B00336_tp2

February

B00336_tp6

June

B00336_tp10

October

B00336_tp3

March

B00336_tp7

July

B00336_tp11

November

B00336_tp4

April

B00336_tp8

August

B00336_tp12

December

- 2 No

2. Was the **postal code** for the location specified below during the **2020** calendar year?

If the facility was situated in more than one location during **2020** please **report** the postal code for the facility in the **2020** calendar year.

This information is being confirmed to ensure the reported figures contribute to the estimates for the correct drainage region.

B00123

- 1 Yes

- 2 No



What was the **postal code**?

Postal code

B50057

3. In **2020**, what was the **average number of people** working on the premises of this facility in full-time equivalents (FTE)?

Include permanent, contract and casual employees that work on the premises.

Employment may be full-time or part-time, FTE converts part-time jobs to full-time jobs based on the hours worked. For example, if out of four employees employed at your facility one works full-time and the remaining three work the equivalent of half of a full time job, then FTE employment = $1 + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 2.5$.

When exact figures are not available, please provide your best estimate.

Number of people ^{B00337} .

4. How many **days** did this facility **operate** in **2020**?

In operation **includes** facilities that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam or process water.

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Days ^{B00338} .

5. How many **weeks** did this facility **operate** in **2020**?

In operation **includes** facilities that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam or process water.

When exact figures are not available, please provide your best estimate.

Weeks ^{B00339}

6. On average, how many **days per week** did this facility **operate** in **2020**?

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Days per week ⁰⁰³⁴¹ .

7. On average, how many **hours** did this facility **operate** in a day in **2020**?

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Hours ^{B00342} .

Unit of measure

If you select a multiple of a unit of measure as your reporting unit, please take care to enter the correct decimal values or number of zeros when reporting water volumes in this questionnaire. **For example**, if thousands of imperial gallons is specified as the unit of measure, note that a reported quantity of 3.5 = 3,500 (3.5 thousand) imperial gallons, whereas a reported quantity of 3,500 = 3,500,000 (3.5 million) imperial gallons.

Please select only one unit of measure.

8. What **unit of measure** will be used to report **water volumes** throughout this questionnaire?

B00522

Cubic metres (M3)

- Tens of cubic metres (10 M3)
If you select "tens of cubic metres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 35 cubic metres.
- Thousands of cubic metres (1,000 M3)
If you select "thousands of cubic metres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 cubic metres.

Litres (L)

- Hectolitres (hL)
If you select "hectolitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 350 litres.
- Thousands of litres (1,000 L) or kilolitres (kL)
If you select "thousands of litres" or "kilolitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 litres.
- Millions of litres (1,000,000 L) or megalitres (ML)
If you select "millions of litres" or "megalitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500,000 litres.

Imperial gallons (imp. gal.)

- Thousands of US gallons (1,000 US gal.)
If you select "thousands of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 US gallons.

US gallons (US gal.)

- Thousands of US gallons (1,000 US gal.)
If you select "thousands of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 US gallons.
- Millions of US gallons (1,000,000 US gal.)
If you select "millions of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500,000 US gallons.
- Cubic feet (cu. ft.)

Water intake by source and type

9. Please report the **volume of intake water** for the following types and sources.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

2020
volume of intake water

► Freshwater

For the purpose of this survey, freshwater contains an average of 900 parts per million (ppm) or less of total dissolved solids.

- | | | |
|---|----------------|----------------------|
| a. Public utility
i.e., a publicly owned/operated (municipal, city or provincial) system of drawing, treating and distributing water | E79007_y1_sc1 | <input type="text"/> |
| b. Self-supplied surface water system
i.e., lake, river | E79007_y1_sc2 | <input type="text"/> |
| c. Self-supplied groundwater system
i.e., well, springs | E79007_y1_sc3 | <input type="text"/> |
| d. Other freshwater sources
e.g., delivery of water from a private supplier, an adjacent industry, rain water, run-off water
Exclude bottled water intended for personal consumption. | E79007_y1_sc90 | <input type="text"/> |

Subtotal volume of freshwater intake in 2020

E79007_y1_sc100

► Saline or brackish water

For the purpose of this survey, saline or brackish water contains an average of more than 900 parts per million (ppm) of total dissolved solids.

- | | | |
|--|----------------|----------------------|
| a. Self-supplied groundwater system
i.e., well, spring | E79007_y2_sc3 | <input type="text"/> |
| b. Self-supplied tide water (salt water) body
i.e., estuary, bay, ocean | E79007_y2_sc4 | <input type="text"/> |
| c. Other saline or brackish water sources
e.g., delivery of water from a private supplier, an adjacent industry | E79007_y2_sc90 | <input type="text"/> |

Subtotal volume of saline or brackish water intake in 2020

E79007_y2_sc100

Total volume of intake water in 2020

E79007_y100_sc100

Treatment of intake water

10. Please report the volume of **intake water treated** within this facility **prior to initial use** for the following methods of treatment.

Exclude the treatment of used water, waste water or effluent. If a given volume of water undergoes more than one treatment, please **report** the volume of water for each type of treatment.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

		2020 volume of intake water treated
a.	Screening The removal of larger pieces of solid matter from water using a screen barrier. Includes the bulk screening of intake water at the source.	E79008_m1 <input type="text"/>
b.	Filtration The removal of smaller pieces of solid matter from water using a filter barrier.	E79008_m2 <input type="text"/>
c.	Chlorination — disinfection The addition of chlorine or other disinfectants to water.	E79008_m3 <input type="text"/>
d.	Corrosion and slime control Includes the control of scale, corrosion, biological growth and sludge.	E79008_m4 <input type="text"/>
e.	Alkalinity control The chemical treatment of water to attain required pH level.	E79008_m5 <input type="text"/>
f.	Hardness or water softening The removal of calcium and magnesium from water to reduce hardness.	E79008_m6 <input type="text"/>
g.	Coagulation or flocculation The absorption of particles in order to easily remove them from water.	E79008_m7 <input type="text"/>
h.	Other category of treatment — Item 1 Other treatments include electrolysis, de-salination, etc. E79007	E79008_m91 <input type="text"/>
i.	Other category of treatment — Item 2 Other treatments include electrolysis, de-salination, etc. E79007	E79008_m92 <input type="text"/>
j.	Other category of treatment — Item 3 Other treatments include electrolysis, de-salination, etc. E79007	E79008_m93 <input type="text"/>

Water intake by initial use

11. Please report the **volumes of intake water by initial use.**

Exclude recirculated or reused water, i.e., water that **leaves** a particular sub-system and **re-enters** it or is **used in another** sub-system.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

**2020
volume of intake water
by use**

a. Process water

i.e., water that serves in any level of the facility process

Include water which:

- comes in direct contact with products and/or materials
- is used in the sanitation of process equipment
- is consumed in milling and special processes
- is included in final output
- has been used for another purpose, and is undergoing its final use as process water.

E79009_dt1

b. Cooling, condensing and steam

i.e., water which does not come in direct contact with the products, materials or by-products of the processing operation

Include:

- pass-through water used in the operation of cooling or process equipment (including air conditioning)
- water introduced into boilers for the production of steam for either process operations or electric power.

E79009_dt2

c. Sanitary service or domestic use

i.e., water used for toilets, janitorial services, lawn watering, washing vehicles

E79009_dt4

d. Other purpose or use — Item 1

Exclude water pumped by the facility and intended for initial use outside the facility.

E79009_dt91

e. Other purpose or use — Item 2

Exclude water pumped by the facility and intended for initial use outside the facility.

E79009_dt92

f. Other purpose or use — Item 3

Exclude water pumped by the facility and intended for initial use outside the facility.

E79009_dt93

Total volume of intake water by initial use in 2020

The sum of the intake water should equal the amount reported at question 9.

E79009_dt100

Water recirculation or reuse by purpose

12. Please report the **volumes of water recirculated or reused** by purpose. Every time a volume of water is recirculated or reused it should be counted.

Recirculated or reused water refers to water **used more than once** in your facility. It is water that **leaves** a sub-system and is then recirculated or reused in the same sub-system, or **used in a different** sub-system. It does not refer to water that circulates many times within the same sub-system **i.e.**, it **excludes** closed-loop systems.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

**2020
volume of water
recirculated or reused**

a. Process water

i.e., water that serves in any level of the manufacturing process

Include water which:

- comes in direct contact with products and/or materials
- is used in the sanitation of process equipment
- is consumed in milling and special processes
- is included in final output
- has been used for another purpose, and is undergoing its final use as process water.

E79011_dt1

b. Cooling, condensing and steam

i.e., water which does not come in direct contact with the products, materials or by-products of the processing operation

Include:

- pass-through water used in the operation of cooling or process equipment (including air conditioning)
- water introduced into boilers for the production of steam for either process operations or electric power.

E79011_dt2

E79011_dt90

c. Other purpose or use

E79011_dt100

Total volume of water recirculated or reused in 2020

For information only

Treatment of discharge water

13. Please report the volumes of water according to their **final point of discharge** and **most advanced treatment** process used at this facility.

For water that is subjected to more than one type (primary, secondary or tertiary) of treatment in preparation for discharge, please report those volumes only at the most advanced treatment process that is applied; in other words, please do not double-report treated water volumes.

Treatment type:

- **no treatment:** the water that is discharged without treatment after use
- **primary / mechanical treatment:** the physical removal of large suspended, floating and precipitated solids from untreated wastewater using grates, screens and/or settling tanks
- **secondary / biological treatment:** the removal or reduction of effluent contaminants from primary wastewater treatment through the promotion of bacterial growth and other microbes that break down organic waste
- **tertiary / advanced treatment:** advanced cleaning of wastewater that goes beyond the secondary or biological stage, removing nutrients such as phosphorus, nitrogen, and most BOD and suspended solids through biological or chemical processes.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

	No treatment	Primary or mechanical	Secondary or biological	Tertiary or advanced
a. Public sewage system	E79012_m8_sc1 <input type="text"/>	E79012_m9_sc1 <input type="text"/>	E79012_m10_sc1 <input type="text"/>	E79012_m11_sc1 <input type="text"/>
b. Surface freshwater bodies	E79012_m8_sc5 <input type="text"/>	E79012_m9_sc5 <input type="text"/>	E79012_m10_sc5 <input type="text"/>	E79012_m11_sc5 <input type="text"/>
c. Tide water (ocean)	E79012_m8_sc4 <input type="text"/>	E79012_m9_sc4 <input type="text"/>	E79012_m10_sc4 <input type="text"/>	E79012_m11_sc4 <input type="text"/>
d. Groundwater	E79012_m8_sc3 <input type="text"/>	E79012_m9_sc3 <input type="text"/>	E79012_m10_sc3 <input type="text"/>	E79012_m11_sc3 <input type="text"/>
e. Other point of discharge	E79012_m8_sc90 <input type="text"/>	E79012_m9_sc90 <input type="text"/>	E79012_m10_sc90 <input type="text"/>	E79012_m11_sc90 <input type="text"/>
Subtotal volume of discharge water	E79012_m8_sc100 <input type="text"/>	E79012_m9_sc100 <input type="text"/>	E79012_m10_sc100 <input type="text"/>	E79012_m11_sc100 <input type="text"/>
Total volume of discharge water in 2020				E79012_m100_sc100 <input type="text"/>

Monthly water intake and discharge

14. In **2020**, what was the monthly water intake and discharge for this facility?

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

	Volume of water intake	Volume of water discharge
a. January	E79007_tp1 <input type="text"/>	E79012_tp1 <input type="text"/>
b. February	E79007_tp2 <input type="text"/>	E79012_tp2 <input type="text"/>
c. March	E79007_tp3 <input type="text"/>	E79012_tp3 <input type="text"/>
d. April	E79007_tp4 <input type="text"/>	E79012_tp4 <input type="text"/>
e. May	E79007_tp5 <input type="text"/>	E79012_tp5 <input type="text"/>
f. June	E79007_tp6 <input type="text"/>	E79012_tp6 <input type="text"/>
g. July	E79007_tp7 <input type="text"/>	E79012_tp7 <input type="text"/>
h. August	E79007_tp8 <input type="text"/>	E79012_tp8 <input type="text"/>
i. September	E79007_tp9 <input type="text"/>	E79012_tp9 <input type="text"/>
j. October	E79007_tp10 <input type="text"/>	E79012_tp10 <input type="text"/>
k. November	E79007_tp11 <input type="text"/>	E79012_tp11 <input type="text"/>
l. December	E79007_tp12 <input type="text"/>	E79012_tp12 <input type="text"/>
Total volume in 2020	E79007_tp100 <input type="text"/>	E79012_tp100 <input type="text"/>

15. If the **total discharge volume** is **greater** than the **total intake volume**, please indicate the **reasons**.

B00343

Reason

Water acquisition costs

16. Please report this facility's **2020** water acquisition costs.

When exact figures are not available, please provide your best estimate.

**2020
cost in CAN\$**

a. Payment to public utility

Report cost for water volume reported at question 11.

If possible, **include** only the portion paid for water and **exclude** sewer charges.

F62551_sr1

\$.00

b. Annual intake licences, permits and royalties

Please **report** the annual cost of intake licences, permits and royalties.

If not purchased annually, please provide the pro-rated cost.

F62551_sr2

\$.00

c. Payment for purchase of water from another operator and/or industrial supplier

F62551_sr3

\$.00

17. Does the payment to a public utility reported at question 16 include a **sewer surcharge**?

If no **sewer surcharge** was reported please select "Not applicable".

Sewer surcharge refers to the payment to a public utility for the ongoing maintenance and operation of sewer infrastructure and the treatment and discharge of water to a public sewage system.

B00523

- 1 Yes
2 No
3 Not applicable

Water operating and maintenance costs

18. Please report the total **2020** operating and maintenance cost for this facility's water systems.

Include the material, labour and energy costs incurred to operate and maintain your water systems.

Consider the systems at your facility which:

- **bring in** water
- **treat intake** water
- **recirculate and reuse** water
- **treat discharge** water.

When exact figures are not available, please provide your best estimate.

Total cost in CAN\$

F61083_v100

\$.00

19. Of the reported costs at question 18, what were the **2020 operating and maintenance costs** for the following water systems?

When exact figures are not available, please provide your best estimate.

2020 cost in CAN\$

a. Intake water acquisition

Include the material, labour and energy costs incurred to operate and maintain the systems that bring water into your facility.

F61083_v1

\$.00 \$

b. Intake water treatment

Include the material, labour and energy costs incurred to operate and maintain the systems to treat water brought into your facility.

F61083_v2

\$.00 \$

c. Water recirculation and reuse

Include the material, labour and energy costs incurred to operate and maintain the systems to recirculate and reuse water in your facility.

F61083_v3

\$.00 \$

d. Discharge water treatment

Include the material, labour and energy costs incurred to operate and maintain the systems to treat water discharged by your facility.

F61083_v4

\$.00 \$

Total operating and maintenance costs in 2020

F61083_v100PF1

\$.00

Other details

20. In **2020**, what were this facility's **capital expenditures** on water intake, discharge or treatment facilities?

Include all relevant outlays for machinery and equipment purchases, and their installation, as well as for construction related to water intake, discharge and treatment **i.e.**, called capital outlay or capital expense.

Exclude operating and maintenance costs.

For example, the most common capital expenditures **include**:

- purchase and/or installation of new equipment
- purchase of new machinery or transportation equipment
- creation of new well or ground water installation.

When exact figures are not available, please provide your best estimate.

Capital expenditures in CAN\$

F80134

\$.00

21. Which of the following goods, technologies and services were purchased related to water management and efficiency (including water recirculation and reuse) by this establishment during the **2020** fiscal year?

Select all that apply.

Goods and technologies

B05349_y24_p331

Software for measurement and control of water use

B05349_y24_p332

Platforms or systems for measurement and control of water use

B05349_y24_p333

Sensors for measurement and control of water use

B05349_y24_p89

Greywater reuse systems

B05349_y24_p334

Equipment to reduce water consumption

B05349_y24_p83

Water desalination equipment

B05349_y24_p336

Rainwater collection equipment

B05349_y24_p305

All other water management and efficiency goods and technologies

Specify other water management and efficiency goods and technologies

B05349_y24_p306

OR

B05349_y24_p341

None of the above

Services

B05351_y24_p299

Planning and design services

B05351_y24_p300

Efficiency consulting services

B05351_y24_p337

Laboratory service

B05351_y24_p302

Pipe inspection services

B05351_y24_p301

Piloting, validation and verification services

B05351_y24_p303

Training and plant operation services

B05351_y24_p305

Augmentation ou diminution de la demande du marché

B05351_y24_p306

All other water management and efficiency services

Specify other services related to water management and efficiency

B05349_y24_p306

OR

B05351_y24_p341

None of the above

Contact person

22. Statistics Canada may need to contact the person who completed this questionnaire for further information.

If the contact person is the same as on cover page, please check → **Go to "Feedback"**

Otherwise, who is the **best person to contact** about this questionnaire?

First name

Last name

Title

Email address (Example: user@example.gov.ca)

Telephone number (including area code)

Example: 123-123-1234

Extension number
(if applicable)

Fax number (including area code)

Example: 123-123-1234

Feedback

23. How long did it take to complete this questionnaire?

Include the time spent gathering the necessary information.....

Hours

Minutes

24. We invite your comments about this questionnaire.

B00002

General Information

Confidentiality

Your answers are confidential.

Statistics Canada is prohibited by law from releasing any information it collects which could identify any person, business, or organization, unless consent has been given by the respondent or as permitted by the *Statistics Act*. Statistics Canada will use the information from this survey for statistical purposes.

Data-sharing agreements

To reduce respondent burden, Statistics Canada has entered into data sharing agreements with provincial and territorial statistical agencies and other government organizations, which have agreed to keep the data confidential and use them only for statistical purposes. Statistics Canada will only share data from this survey with those organizations that have demonstrated a requirement to use the data.

Section 11 of the *Statistics Act* provides for the sharing of information with provincial and territorial statistical agencies that meet certain conditions. These agencies must have the legislative authority to collect the same information, on a mandatory basis, and the legislation must provide substantially the same provisions for confidentiality and penalties for disclosure of confidential information as the *Statistics Act*. Because these agencies have the legal authority to compel businesses to provide the same information, consent is not requested and businesses may not object to the sharing of the data.

For this survey, there are **Section 11** agreements with the provincial and territorial statistical agencies of Newfoundland and Labrador, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, and the Yukon. The shared data will be limited to information pertaining to business establishments located within the jurisdiction of the respective province or territory.

Section 12 of the *Statistics Act* provides for the sharing of information with federal, provincial or territorial government organizations.

Under **Section 12**, you may refuse to share your information with any of these organizations by writing a letter of objection to the Chief Statistician, specifying the organizations with which you do not want Statistics Canada to share your data and mailing it to the following address:

Chief Statistician of Canada
Statistics Canada
Attention of Director, Enterprise Statistics Division
150 Tunney's Pasture Driveway
Ottawa, Ontario
K1A 0T6.

You may also contact us by email at statcan.esd-helpdesk-dse-bureaudepannage.statcan@canada.ca or by fax at 613-951-6583.

For this survey, there are **Section 12** agreements with the statistical agencies of Prince Edward Island, the Northwest Territories and Nunavut as well as with Environment Canada.

For agreements with provincial and territorial government organizations, the shared data will be limited to information pertaining to business establishments located within the jurisdiction of the respective province or territory.

Record linkages

To enhance the data from this survey and to minimize the reporting burden, Statistics Canada may combine it with information from other surveys or from administrative sources.

**Thank you for completing this questionnaire.
Please retain a copy for your records.
Visit our website, www.statcan.gc.ca**

2020 Biennial Industrial Water Survey: Mineral Extraction Industries

CONFIDENTIAL once completed.

Selon nos dossiers votre langue de préférence est l'anglais, si vous préférez recevoir ce document en français, veuillez nous appeler au numéro sans frais suivant : 1-866-445-4323 ou ATS 1-855-382-7745

This information is collected under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S-19.
COMPLETION OF THIS QUESTIONNAIRE IS A LEGAL REQUIREMENT UNDER THIS ACT.

Introduction

Survey purpose

Statistics Canada conducts this survey every two years to collect detailed information on water use by manufacturing, mining, and electrical power generating industries in Canada.

The survey will ask about the following for your operation and/or facility:

- the sources of water
- the treatment of water before it's used
- the initial uses of water
- the recirculation and reuse of water
- the treatment of water before it's discharged
- the ultimate points of water discharge
- the monthly breakdown of water intake and discharge
- the costs of acquiring water, maintaining and operating the water systems, and discharging water.

This survey collects information that will help Canadians understand how industries use water across the country. The data are used to produce Statistics Canada's Physical

flow account of Water Use in Canada, and Environment and Climate Change Canada's water indicator: Water withdrawal and consumption by sector. Government and private sector analysts use the data to formulate water policies.

Your information may also be used by Statistics Canada for other statistical and research purposes.

Security of emails and faxes

Statistics Canada advises you that there could be a risk of disclosure during facsimile or email. However upon receipt, Statistics Canada will provide the guaranteed level of protection afforded all information collected under the authority of the *Statistics Act*.

Note: Our online questionnaires are secure, there is no risk of data interception when responding to Statistics Canada online surveys.

Confidentiality

The *Statistics Act* protects the confidentiality of information collected by Statistics Canada.

Please return the questionnaire within 28 days.

Please mail the completed questionnaire in the enclosed envelope or fax it to Statistics Canada at 1-888-883-7999.

If you are unable to complete within 28 days **OR** if you need help, call us at **1-866-445-4323** or **TTY 1-855-382-7745**.

Statistics Canada
Operations and Integration Division
150 Tunney's Pasture Driveway
Ottawa, Ontario K1A 0T6

Visit our website, www.statcan.gc.ca

Reporting instructions

- Please provide your best estimate when exact figures are not available.
- Please enter "0" in the corresponding box if the water volume is zero.

Business or organization and contact information

1. **Verify or provide** the business or organization's **legal and operating name** and correct where needed.

Note: Legal name modifications should only be done to correct a spelling error or typo.

Legal name

Operating name (if applicable)

2. **Verify or provide the contact information** of the designated business or organization **contact person** for this questionnaire and correct where needed.

Note: The designated contact person is the person who should receive this questionnaire. The designated contact person may not always be the one who actually completes the questionnaire.

First name

Last name

Title

Preferred language of communication

English

French

Mailing address (number and street)

City

Province, territory or state

Postal code or ZIP code

Example: A9A 9A9 or 12345-1234

Country

Email address

Example: user@example.gov.ca

Telephone number (including area code)

Example: 123-123-1234

Extension number
(if applicable)

Fax number (including area code)

Example: 123-123-1234

3. **Verify or provide the current operational status** of the business or organization identified by the legal and operating name above.

B00323

1 Operational → **Go to question 4**

2 Not currently operational

e.g., temporarily or permanently closed, change of ownership

Why is this business or organization not currently operational?

B00309

2 Seasonal operations → **Go to question 3a**

3 Ceased operations → **Go to question 3b**

4 Sold operations → **Go to question 3c**

5 Amalgamated with other businesses or organizations → **Go to question 3d**

6 Temporarily inactive but will re-open → **Go to question 3e**

7 No longer operating due to other reasons → **Go to question 3f**

3a. Seasonal operations

When did this business or organization close for the season?

Date B00217

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

When does this business or organization expect to resume operations?

Date B00218

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

 → **Go to question 4**

3b. Ceased operations

When did this business or organization cease operations?

Date B00211

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

Why did this business or organization cease operations?

B00311

1 Bankruptcy

2 Liquidation

3 Dissolution

4 Other
Specify the other reasons why the operations ceased

B00312

→ **Go to question 4**

3c. Sold operations

When was this business or organization sold?

Date B00212

What is the legal name of the buyer?

B00406

→ Go to question 4

3d. Amalgamated with other businesses or organizations

When did this business or organization amalgamate?

Date B00213

What is the legal name of the resulting or continuing business or organization?

B00407

What are the legal names of the other amalgamated businesses or organizations?

B00408

→ Go to question 4

3e. Temporarily inactive but will re-open

When did this business or organization become temporarily inactive?

Date B00214

When does this business or organization expect to resume operations?

Date B00215

Why is this business or organization temporarily inactive?

B00313

→ Go to question 4

3f. No longer operating due to other reasons

When did this business or organization cease operations?

Date B00216

Why did this business or organization cease operations?

B00314

4. **Verify or provide the current main activity** of the business or organization identified by the legal and operating name.

Note: The described activity was assigned using the North American Industry Classification System (NAICS).

B05002

1 This is the current main activity → **Go to next section**

2 This is **not** the current main activity
Provide a **brief but precise description** of this business or organization's **main activity**
e.g., breakfast cereal manufacturing, shoe store, software development

B05003

5. Was this business or organization's main activity ever classified as:

B05111

1 Yes

2 No → **Go to next section**

6. When did the main activity change?

Date B00219

YYYY	MM	DD
<input type="text"/>	<input type="text"/>	<input type="text"/>

For information only

General information

1. Was this operation **in operation at least one day** during the **2020** calendar year?

In operation **includes** operations that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam or process water.

B00336

1 Yes



Which **months** was this operation **operational**?

Select all that apply.

B00336_tp13

All months

OR

B00336_tp1

January

B00336_tp5

May

B00336_tp9

September

B00336_tp2

February

B00336_tp6

June

B00336_tp10

October

B00336_tp3

March

B00336_tp7

July

B00336_tp11

November

B00336_tp4

April

B00336_tp8

August

B00336_tp12

December

2 No

2. Was the operation **specified below located in** during the **2020** calendar year?

If the operation was situated in more than one location during 2020 please **report** the province or territory for the **last location** of the operation in the 2020 calendar year.

This information is being confirmed to ensure the reported figures contribute to the correct provincial or territorial estimates.

B00122

1 Yes

2 No



In which **province or territory** was the operation **last located**?

Select all that apply.

B50039

01 Newfoundland and Labrador

06 Ontario

11 Yukon

02 Prince Edward Island

07 Manitoba

12 Northwest Territories

03 Nova Scotia

08 Saskatchewan

13 Nunavut

04 New Brunswick

09 Alberta

05 Quebec

10 British Columbia

3. In **2020**, what was the **average number of people** working on the premises of this operation in full-time equivalents (FTE)?

Include permanent, contract and casual employees that work on the premises.

Employment may be full-time or part-time, FTE converts part-time jobs to full-time jobs based on the hours worked. For example, if out of four employees employed at your operation one works full-time and the remaining three work the equivalent of half of a full time job, then FTE employment = $1 + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 2.5$.

When exact figures are not available, please provide your best estimate.

Number of people ^{B00337} .

4. How many **days** did this operation **operate** in **2020**?

In operation **includes** operations that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam or process water.

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Days ^{B00338} .

5. How many **weeks** did this operation **operate** in **2020**?

In operation **includes** operations that are temporarily closed but there was some form of water use **e.g.**, water for sanitary services like toilets and janitorial services, water use for cooling, condensing and steam or process water.

When exact figures are not available, please provide your best estimate.

Weeks ^{B00339}

6. On average, how many **days per week** did this operation **operate** in **2020**?

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Days per week ⁰⁰³⁴¹ .

7. On average, how many **hours** did this operation **operate** in a day in **2020**?

Days refers to calendar days.

When exact figures are not available, please provide your best estimate.

Hours ^{B00342} .

Unit of measure

If you select a multiple of a unit of measure as your reporting unit, please take care to enter the correct decimal values or number of zeros when reporting water volumes in this questionnaire. **For example**, if thousands of imperial gallons is specified as the unit of measure, note that a reported quantity of 3.5 = 3,500 (3.5 thousand) imperial gallons, whereas a reported quantity of 3,500 = 3,500,000 (3.5 million) imperial gallons.

Please select only one unit of measure.

8. What **unit of measure** will be used to report **water volumes** throughout this questionnaire?

B00522

Cubic metres (M3)

- Tens of cubic metres (10 M3)
If you select "tens of cubic metres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 35 cubic metres.
- Thousands of cubic metres (1,000 M3)
If you select "thousands of cubic metres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 cubic metres.

Litres (L)

- Hectolitres (hL)
If you select "hectolitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 350 litres.
- Thousands of litres (1,000 L) or kilolitres (kL)
If you select "thousands of litres" or "kilolitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 litres.
- Millions of litres (1,000,000 L) or megalitres (ML)
If you select "millions of litres" or "megalitres" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500,000 litres.

Imperial gallons (imp. gal.)

- Thousands of US gallons (1,000 US gal.)
If you select "thousands of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 US gallons.

US gallons (US gal.)

- Thousands of US gallons (1,000 US gal.)
If you select "thousands of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500 US gallons.
- Millions of US gallons (1,000,000 US gal.)
If you select "millions of US gallons" as your unit of measure, 3.5 reported in the questionnaire will be counted as 3,500,000 US gallons.
- Cubic feet (cu. ft.)

Water intake by source and type

9. Please report the **volume of intake water** for the following types and sources.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

2020
volume of intake water

► Freshwater

For the purpose of this survey, freshwater contains an average of 900 parts per million (ppm) or less of total dissolved solids.

a. Public utility
i.e., a publicly owned/operated (municipal, city or provincial) system of drawing, treating and distributing water

E79007_y1_sc1

b. Self-supplied surface water system
i.e., lake, river

E79007_y1_sc2

c. Self-supplied groundwater system
i.e., well, springs

E79007_y1_sc3

d. Other freshwater sources
e.g., delivery of water from a private supplier, an adjacent industry, rain water, run-off water
Exclude bottled water intended for personal consumption.

E79007_y1_sc90

Subtotal volume of freshwater intake in 2020

E79007_y1_sc100

► Saline or brackish water

For the purpose of this survey, saline or brackish water contains an average of more than 900 parts per million (ppm) of total dissolved solids.

a. Self-supplied groundwater system
i.e., well, spring

E79007_y2_sc3

b. Self-supplied tide water (salt water) body
i.e., estuary, bay, ocean

E79007_y2_sc4

c. Other saline or brackish water sources
e.g., delivery of water from a private supplier, an adjacent industry

E79007_y2_sc90

Subtotal volume of saline or brackish water intake in 2020

E79007_y2_sc100

Total volume of intake water in 2020

E79007_y100_sc100

Treatment of intake water

10. Please report the volume of **intake water treated** within this operation **prior to initial use** for the following methods of treatment.

Exclude the treatment of used water, waste water or effluent. If a given volume of water undergoes more than one treatment, please **report** the volume of water for each type of treatment.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

		2020 volume of intake water treated
a.	Screening The removal of larger pieces of solid matter from water using a screen barrier. Includes the bulk screening of intake water at the source.	E79008_m1 <input type="text"/>
b.	Filtration The removal of smaller pieces of solid matter from water using a filter barrier.	E79008_m2 <input type="text"/>
c.	Chlorination — disinfection The addition of chlorine or other disinfectants to water.	E79008_m3 <input type="text"/>
d.	Corrosion and slime control Includes the control of scale, corrosion, biological growth and sludge.	E79008_m4 <input type="text"/>
e.	Alkalinity control The chemical treatment of water to attain required pH level.	E79008_m5 <input type="text"/>
f.	Hardness or water softening The removal of calcium and magnesium from water to reduce hardness.	E79008_m6 <input type="text"/>
g.	Coagulation or flocculation The absorption of particles in order to easily remove them from water.	E79008_m7 <input type="text"/>
h.	Other category of treatment — Item 1 Other treatments include electrolysis, de-salination, etc. E79007	E79008_m91 <input type="text"/>
i.	Other category of treatment — Item 2 Other treatments include electrolysis, de-salination, etc. E79007	E79008_m92 <input type="text"/>
j.	Other category of treatment — Item 3 Other treatments include electrolysis, de-salination, etc. E79007	E79008_m93 <input type="text"/>

Water intake by initial use

11. Please report the **volumes of intake water by initial use.**

Exclude recirculated or reused water, i.e., water that **leaves** a particular sub-system and **re-enters** it or is **used in another** sub-system.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

**2020
volume of intake water
by use**

a. Process water

i.e., water that serves in any level of the mining process

Include water which:

- comes in direct contact with products and/or materials
- is used in the sanitation of process equipment
- is consumed in milling and special processes
- is included in final output
- has been used for another purpose, and is undergoing its final use as process water.

E79009_dt1

b. Cooling, condensing and steam

i.e., water which does not come in direct contact with the products, materials or by-products of the processing operation

Include:

- pass-through water used in the operation of cooling or process equipment (including air conditioning)
- water introduced into boilers for the production of steam for either process operations or electric power.

E79009_dt2

c. Sanitary service or domestic use

i.e., water used for toilets, janitorial services, lawn watering, washing vehicles

E79009_dt4

d. Other purpose or use — Item 1

Exclude water pumped by the operation and intended for initial use outside the operation

E79009_dt91

e. Other purpose or use — Item 2

Exclude water pumped by the operation and intended for initial use outside the operation

E79009_dt92

f. Other purpose or use — Item 3

Exclude water pumped by the operation and intended for initial use outside the operation

E79009_dt93

Total volume of intake water by initial use in 2020

The sum of the intake water should equal the amount reported at question 9.

E79009_dt100

12. Of the total volume **of intake water for process** in 2020, what volume of water was consumed or lost?

E61333_dt1

13. Of the total volume **of intake water for cooling, condensing or steam production** in 2020, what volume of water was consumed or lost?

E61333_dt2

14. Of the total volume **water taken in by this operation** in 2020, what volume of intake water was used as injected water or steam in the secondary recovery of oil or natural gas?

E61333_dt8

Water recirculation or reuse by purpose

15. Please report the **volumes of water recirculated or reused** by purpose. Every time a volume of water is recirculated or reused it should be counted.

Recirculated or reused water refers to water **used more than once** in your operation. It is water that **leaves** a sub-system and is then recirculated or reused in the same sub-system, or **used in a different** sub-system. It does not refer to water that circulates many times within the same sub-system **i.e.**, it **excludes** closed-loop systems.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

**2020
volume of water
recirculated or reused**

a. Process water

i.e., water that serves in any level of the mining process

Include water which:

- comes in direct contact with products and/or materials
- is used in the sanitation of process equipment
- is consumed in milling and special processes
- is included in final output
- has been used for another purpose, and is undergoing its final use as process water.

E79011_dt1

b. Cooling, condensing and steam

i.e., water which does not come in direct contact with the products, materials or by-products of the processing operation

Include:

- pass-through water used in the operation of cooling or process equipment (including air conditioning)
- water introduced into boilers for the production of steam for either process operations or electric power.

E79011_dt2

E79011_dt90

c. Other purpose or use

E79011_dt100

Total volume of water recirculated or reused in 2020

For information only

16. Does this operation have a **tailings pond**?

A tailings pond is an excavated pit that forms an open lagoon where liquid effluent or wastewater from the processing of ore is held.

B05225_dt6

1 Yes



Please report the **volume of water recirculated or reused** from tailings pond in **2020**.

When exact figures are not available, please provide your best estimate.

E79011_dt6

Volume

2 No

17. Does this operation **inject water into an oil bearing formation**?

For this survey, "oil bearing formation" refers to a geological formation that produces or contains oil.

B05225_dt5

1 Yes



Please report the **volume of water injected** in **2020**.

When exact figures are not available, please provide your best estimate.

E79011_dt5

Volume

2 No

For information only

Treatment of discharge water

18. Please report the volumes of water according to their **final point of discharge** and **most advanced treatment** process used at this operation.

For water that is subjected to more than one type (primary, secondary or tertiary) of treatment in preparation for discharge, please report those volumes only at the most advanced treatment process that is applied; in other words, please do not double-report treated water volumes.

Treatment type:

- **no treatment:** the water that is discharged without treatment after use
- **primary / mechanical treatment:** the physical removal of large suspended, floating and precipitated solids from untreated wastewater using grates, screens and/or settling tanks
- **secondary / biological treatment:** the removal or reduction of effluent contaminants from primary wastewater treatment through the promotion of bacterial growth and other microbes that break down organic waste
- **tertiary / advanced treatment:** advanced cleaning of wastewater that goes beyond the secondary or biological stage, removing nutrients such as phosphorus, nitrogen, and most BOD and suspended solids through biological or chemical processes.

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

	No treatment	Primary or mechanical	Secondary or biological	Tertiary or advanced
a. Public sewage system	E79012_m8_sc1 <input type="text"/>	E79012_m9_sc1 <input type="text"/>	E79012_m10_sc1 <input type="text"/>	E79012_m11_sc1 <input type="text"/>
b. Surface freshwater bodies	E79012_m8_sc5 <input type="text"/>	E79012_m9_sc5 <input type="text"/>	E79012_m10_sc5 <input type="text"/>	E79012_m11_sc5 <input type="text"/>
c. Tide water (ocean)	E79012_m8_sc4 <input type="text"/>	E79012_m9_sc4 <input type="text"/>	E79012_m10_sc4 <input type="text"/>	E79012_m11_sc4 <input type="text"/>
d. Groundwater	E79012_m8_sc3 <input type="text"/>	E79012_m9_3 <input type="text"/>	E79012_m10_sc3 <input type="text"/>	E79012_m11_sc3 <input type="text"/>
e. Tailings pond	E79012_m8_sc6 <input type="text"/>	E79012_m9_sc6 <input type="text"/>	E79012_m10_sc6 <input type="text"/>	E79012_m11_sc6 <input type="text"/>
f. Injecting to producing formations	E79012_m8_sc7 <input type="text"/>	E79012_m9_sc7 <input type="text"/>	E79012_m10_sc7 <input type="text"/>	E79012_m11_sc7 <input type="text"/>
g. Other point of discharge	E79012_m8_sc90 <input type="text"/>	E79012_m9_sc90 <input type="text"/>	E79012_m10_sc90 <input type="text"/>	E79012_m11_sc90 <input type="text"/>
Subtotal volume of discharge water	E79012_m8_sc100 <input type="text"/>	E79012_m9_sc100 <input type="text"/>	E79012_m10_sc100 <input type="text"/>	E79012_m11_sc100 <input type="text"/>
Total volume of discharge water in 2020				E79012_m100_sc100 <input type="text"/>

Monthly water intake and discharge

19. In **2020**, what was the monthly water intake and discharge for this operation?

If the water volume is zero, please enter "0" in the corresponding box.

When exact figures are not available, please provide your best estimate.

	Volume of water intake	Volume of water discharge
a. January	E79007_tp1 <input type="text"/>	E79012_tp1 <input type="text"/>
b. February	E79007_tp2 <input type="text"/>	E79012_tp2 <input type="text"/>
c. March	E79007_tp3 <input type="text"/>	E79012_tp3 <input type="text"/>
d. April	E79007_tp4 <input type="text"/>	E79012_tp4 <input type="text"/>
e. May	E79007_tp5 <input type="text"/>	E79012_tp5 <input type="text"/>
f. June	E79007_tp6 <input type="text"/>	E79012_tp6 <input type="text"/>
g. July	E79007_tp7 <input type="text"/>	E79012_tp7 <input type="text"/>
h. August	E79007_tp8 <input type="text"/>	E79012_tp8 <input type="text"/>
i. September	E79007_tp9 <input type="text"/>	E79012_tp9 <input type="text"/>
j. October	E79007_tp10 <input type="text"/>	E79012_tp10 <input type="text"/>
k. November	E79007_tp11 <input type="text"/>	E79012_tp11 <input type="text"/>
l. December	E79007_tp12 <input type="text"/>	E79012_tp12 <input type="text"/>
Total volume in 2020	E79007_tp100 <input type="text"/>	E79012_tp100 <input type="text"/>

20. Of the total volume of **water discharged** by this operation in **2020**, what volume originated as **mine water** (water that was pumped from the mine to allow operations to continue)?

Mine water can come from more than one source **e.g.**, rain and storm run-off, ground water.

When exact figures are not available, please provide your best estimate.

E79013

Volume

Water acquisition costs

21. Please report this operation's **2020** water acquisition costs.

When exact figures are not available, please provide your best estimate.

**2020
cost in CAN\$**

a. Payment to public utility

Report cost for water volume reported at question 11.

If possible, **include** only the portion paid for water and **exclude** sewer charges.

F62551_sr1

\$.00

b. Annual intake licences, permits and royalties

Please **report** the annual cost of intake licences, permits and royalties.

If not purchased annually, please provide the pro-rated cost.

F62551_sr2

\$.00

c. Payment for purchase of water from another operator and/or industrial supplier

F62551_sr3

\$.00

22. Does the payment to a public utility reported at question 16 include a **sewer surcharge**?

If no **sewer surcharge** was reported please select "Not applicable".

Sewer surcharge refers to the payment to a public utility for the ongoing maintenance and operation of sewer infrastructure and the treatment and discharge of water to a public sewage system.

B00523

- 1 Yes
- 2 No
- 3 Not applicable

Water operating and maintenance costs

23. Please report the total **2020** operating and maintenance cost for this operation's water systems.

Include the material, labour and energy costs incurred to operate and maintain your water systems.

Consider the systems at your operation which:

- **bring in** water
- **treat intake** water
- **recirculate and reuse** water
- **treat discharge** water.

When exact figures are not available, please provide your best estimate.

F61083_v100

Total cost in CAN\$

\$.00

24. Of the reported costs at question 23, what were the **2020 operating and maintenance costs** for the following water systems?

When exact figures are not available, please provide your best estimate.

2020 cost in CAN\$

a. Intake water acquisition

Include the material, labour and energy costs incurred to operate and maintain the systems that bring water into your operation.

F61083_v1

\$.00

b. Intake water treatment

Include the material, labour and energy costs incurred to operate and maintain the systems to treat water brought into your operation.

F61083_v2

\$.00

c. Water recirculation and reuse

Include the material, labour and energy costs incurred to operate and maintain the systems to recirculate and reuse water in your operation.

F61083_v3

\$.00

d. Discharge water treatment

Include the material, labour and energy costs incurred to operate and maintain the systems to treat water discharged by your operation.

F61083_v4

\$.00

Total operating and maintenance costs in 2020

F61083_v100PF1

\$.00

Other details

25. In **2020**, what were this operation's **capital expenditures** on water intake, discharge or treatment facilities?

Include all relevant outlays for machinery and equipment purchases, and their installation, as well as for construction related to water intake, discharge and treatment **i.e.**, called capital outlay or capital expense.

Exclude operating and maintenance costs.

For example, the most common capital expenditures **include**:

- purchase and/or installation of new equipment
- purchase of new machinery or transportation equipment
- creation of new well or ground water installation

When exact figures are not available, please provide your best estimate.

Capital expenditures in CAN\$

F80134

\$.00

26. Which of the following goods, technologies and services were purchased related to water management and efficiency (including water recirculation and reuse) by this establishment during the **2020** fiscal year?

Select all that apply.

Goods and technologies

B05349_y24_p331

Software for measurement and control of water use

B05349_y24_p332

Platforms or systems for measurement and control of water use

B05349_y24_p333

Sensors for measurement and control of water use

B05349_y24_p89

Greywater reuse systems

B05349_y24_p334

Equipment to reduce water consumption

B05349_y24_p83

Water desalination equipment

B05349_y24_p336

Rainwater collection equipment

B05349_y24_p305

All other water management and efficiency goods and technologies

Specify other water management and efficiency goods and technologies

B05349_y24_p306

OR

B05349_y24_p341

None of the above

Services

B05351_y24_p299

Planning and design services

B05351_y24_p300

Efficiency consulting services

B05351_y24_p337

Laboratory service

B05351_y24_p302

Pipe inspection services

B05351_y24_p301

Piloting, validation and verification services

B05351_y24_p303

Training and plant operation services

B05351_y24_p305

Augmentation ou diminution de la demande du marché

B05351_y24_p306

All other water management and efficiency services

Specify other services related to water management and efficiency

B05349_y24_p306

OR

B05351_y24_p341

None of the above

Contact person

27. Statistics Canada may need to contact the person who completed this questionnaire for further information.

If the contact person is the same as on cover page, please check → **Go to "Feedback"**

Otherwise, who is the **best person to contact** about this questionnaire?

First name

Last name

Title

Email address (Example: user@example.gov.ca)

Telephone number (including area code)

Example: 123-123-1234

Extension number
(if applicable)

Fax number (including area code)

Example: 123-123-1234

Feedback

28. How long did it take to complete this questionnaire?

Include the time spent gathering the necessary information.....

Hours

Minutes

29. We invite your comments about this questionnaire.

B00002

General Information

Confidentiality

Your answers are confidential.

Statistics Canada is prohibited by law from releasing any information it collects which could identify any person, business, or organization, unless consent has been given by the respondent or as permitted by the *Statistics Act*. Statistics Canada will use the information from this survey for statistical purposes.

Data-sharing agreements

To reduce respondent burden, Statistics Canada has entered into data sharing agreements with provincial and territorial statistical agencies and other government organizations, which have agreed to keep the data confidential and use them only for statistical purposes. Statistics Canada will only share data from this survey with those organizations that have demonstrated a requirement to use the data.

Section 11 of the *Statistics Act* provides for the sharing of information with provincial and territorial statistical agencies that meet certain conditions. These agencies must have the legislative authority to collect the same information, on a mandatory basis, and the legislation must provide substantially the same provisions for confidentiality and penalties for disclosure of confidential information as the *Statistics Act*. Because these agencies have the legal authority to compel businesses to provide the same information, consent is not requested and businesses may not object to the sharing of the data.

For this survey, there are **Section 11** agreements with the provincial and territorial statistical agencies of Newfoundland and Labrador, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, and the Yukon. The shared data will be limited to information pertaining to business establishments located within the jurisdiction of the respective province or territory.

Section 12 of the *Statistics Act* provides for the sharing of information with federal, provincial or territorial government organizations.

Under **Section 12**, you may refuse to share your information with any of these organizations by writing a letter of objection to the Chief Statistician, specifying the organizations with which you do not want Statistics Canada to share your data and mailing it to the following address:

Chief Statistician of Canada
Statistics Canada
Attention of Director, Enterprise Statistics Division
150 Tunney's Pasture Driveway
Ottawa, Ontario
K1A 0T6.

You may also contact us by email at statcan.esd-helpdesk-dse-bureaudepannage.statcan@canada.ca or by fax at 613-951-6583.

For this survey, there are **Section 12** agreements with the statistical agencies of Prince Edward Island, the Northwest Territories and Nunavut as well as with Environment Canada.

For agreements with provincial and territorial government organizations, the shared data will be limited to information pertaining to business establishments located within the jurisdiction of the respective province or territory.

Record linkages

To enhance the data from this survey and to minimize the reporting burden, Statistics Canada may combine it with information from other surveys or from administrative sources.

**Thank you for completing this questionnaire.
Please retain a copy for your records.
Visit our website, www.statcan.gc.ca**