



Small Drinking Water Systems: Who Does What in the Yukon?

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1.0 Source Water Protection

1.1 Who has a stewardship role related to water source protection (lead agency)?

The Water Quality Section within the *Water Resources Branch* (Government of Yukon) undertakes a variety of activities aimed at ensuring the protection of the Yukon's natural waterways.

1.2 Who oversees liquid and solid waste management?

Community services, such as water supply and delivery, sewage collection and disposal, and solid waste management are provided from a variety of government agencies. Private sewage disposal systems are regulated by the *Department of Health and Social Services* (DHSS) through the *Public Health and Safety Act – Sewage Disposal Systems Regulation*.¹

The *Department of Community Services* (Waste Management) (Government of Yukon) has developed a Solid Waste Action Plan for waste management. As part of the Plan, the Solid Waste Advisory Committee makes recommendations to the Minister of Community Services to improve solid waste and recycling programs and helps implement the plan. Most solid waste is deposited in waste disposal sites located near all Yukon communities. The Department of Community Services manages 19 of 26 sites, while incorporated municipalities manage the rest.²

1.3 Who is responsible for land use planning activities (from livestock to farming practices, including activities addressing drinking water concerns)?

The *Department of Community Services* (Land Development Process) (Government of Yukon) has land management responsibilities, which are shared between governments and between departments. Four jurisdictions administer land in the Yukon³:

- The *Yukon government* controls the majority of vacant Yukon land in the territory and administers zoning regulations through the *Area Development Act* and subdivision through the *Subdivision Act* and *Municipal Act*.

¹ http://www.gov.yk.ca/legislation/regs/oic1999_082.pdf

² http://www.community.gov.yk.ca/cd/waste_management.html

³ http://www.community.gov.yk.ca/land_process.html

- Each *Yukon First Nation government* controls its own settlement lands and is responsible for land-use authorizations and disposition of interests on its settlement lands.
- *Eight municipal governments* in the Yukon (Whitehorse, Dawson City, Mayo, Teslin, Carmacks, Watson Lake, Haines Junction, and Faro) have land responsibilities, including community planning, development, and subdivision approval-related responsibilities.
- The *Government of Canada* controls lands within the three national parks, Kluane National Park, Ivvavik National Park and Vuntut National Park, and the Nisutlin River Delta National Wildlife Area.

Also, *Energy, Mines and Resources* (Government of Yukon) is involved with land use planning. Regional land use planning is a step-by-step process where the Yukon government, First Nations, stakeholders, and residents develop a blueprint to guide the future use and development of land in their area. A final regional land use plan provides a broad level vision and goals for the allocation, management, and use of land and resources, including renewable, non-renewable, and water-based resources within a region.⁴

1.4 Who is responsible for ensuring that activities, such as construction of highway infrastructure, logging, or mining neither degrade source waters nor introduce contaminants into the water supply?

The *Highway and Public Works Department* (Transportation Division) (Government of Yukon) manages improvements and construction on 4,850 kilometers of road in Yukon.⁵

Energy, Mines and Resources (Government of Yukon) is involved with Inspections (Field Operations, Forestry Inspections, Land Inspections, Natural Resource Officers, Client Services and Inspections).⁶

Environment (Government of Yukon) manages snow surveys, water quality, hydrology, water inspections, and water level conditions. The Contaminated Site Regulation establishes cleanup standards, processes for identifying and investigating contaminated sites, and permits for managing contaminated material within the Yukon. Also, Environment Yukon assists in the collection of household hazardous waste and spills reporting.⁷

1.5 Who delivers permits to draw water?

The *Yukon Water Board* is an independent administrative tribunal established under the *Waters Act*.⁸ The Board is responsible for the issuance of water use licences for the use of water and/or the deposit of waste into water.⁹

1.6 Who has control over the watershed and delineates the watershed/aquifer area?

The *Government of Yukon* works with *First Nations* and relevant *Planning Commissions* (e.g. Peel Watershed Planning Commission) and stakeholders to manage watershed areas.

1.7 Who is responsible for the watershed/aquifer management plan? (The plan establishes measures to reduce risks. The watershed management plan may also include an

⁴ http://www.emr.gov.yk.ca/lands/regional_land_use_planning.html

⁵ <http://www.hpw.gov.yk.ca/trans/engineering/bridgeconstruction.html>

⁶ <http://www.gov.yk.ca/services/emr.html>

⁷ <http://www.gov.yk.ca/services/env.html>

⁸ <http://www.gov.yk.ca/legislation/acts/waters.pdf>

⁹ <http://www.yukonwaterboard.ca/>

incident and emergency response plan, plan for water conservation, and contingency plans for dealing with water scarcity emergencies).

Regional land use planning involves *Energy, Mines and Resources* (Government of Yukon), *First Nations, stakeholders*, and *residents* to develop a blueprint and guide the management and use of land and resources, including water-based resources within a region.

The Government of Yukon has responsibility for consultations on land use plans (e.g., Peel Watershed land use plan).¹⁰

1.8 Any source vulnerability assessment and ranking?

Ecojustice provided a C- rating to the Yukon for source water protection, and stated it “has improved standards related to treatment and contaminants and has rules requiring separation of drinking water sources and potential contamination threats, but no SWP is in place.”¹¹

2.0 Water Treatment and Distribution

2.1 Any lead funding organization for water system planning and infrastructure improvements?

Within the Yukon Government, several departments play a role in the overall management of drinking water systems¹²:

- *Community Services*, Community Development Branch, currently manages seven community drinking water supplies and manages or contracts out four trucked-water delivery operations.
- *Health and Social Services*, Environmental Health Services Branch monitors and regulates Drinking Water Quality in the Yukon in accordance with the *Yukon Public Health and Safety Act* and its regulations – the most applicable being the Drinking Water Regulation for large systems and bulk water delivery.
- *Environment*, Water Resources Branch administers water-related policies, regulations, and programs under the *Waters Act*.
- *Highways and Public Works*, Property Management Agency and Yukon Housing Corporation develop and operate water systems for Yukon Government-owned facilities in communities throughout the Yukon.

The roles of other levels of government can vary in each community but generally:

- *Aboriginal Affairs and Northern Development Canada* provides a funding and advisory role to First Nation communities to ensure safe drinking water;
- most *First Nations*, both self-governing and non-self-governing, manage all or part of their water supply and distribution (trucked, private wells) to their members. Some First Nations also provide public drinking water access points for self-haul and trucked-water services for rural Yukoners;
- *municipalities* manage the water supply and distribution (piped, trucked) within municipal boundaries (this may include First Nation communities). Some municipalities also provide public drinking water access points for self-haul and trucked-water services for rural Yukoners.

¹⁰ http://www.emr.gov.yk.ca/lands/regional_land_use_planning.html

¹¹ <http://www.ecojustice.ca/publications/files/canadas-drinking-water-report-card-infographic-1>

(Although the report provided a D+ rating, this was revised to C- rating following publication.)

¹² http://www.infrastructure.gov.yk.ca/pdf/yukon_infrastructure_status_report.pdf

2.2 Any construction permits?

The *Government of Yukon* manages building and construction permitting. Through the Division of Community Services, Building Safety supports, administers, and enforces building, plumbing, electrical, and mechanical standards. It also reviews development permits and maintains a building information repository.¹³

2.3 Any fee collected for water distribution?

The *Yukon Water Board* collects fees as required by the *Waters Act*. The fees required are based on an application fee and a water use fee that is calculated based on the maximum amount proposed.¹⁴

2.4 Any operator permit? Any training? How are new policies disseminated?

The *Department of Health and Social Services* has prepared legislation (Drinking Water Regulation), which requires all persons working as water system operators for large systems and bulk water delivery be certified by the Environmental Operators Certification Program.¹⁵ The *British Columbia Water and Waste Association* offers a course on Bulk Water Delivery along with relevant courses for piped systems.¹⁶

2.5 Any assessment of treatment system? Any licence of treatment system? By whom?

Health and Social Services manages permits and has established assessment guidelines.¹⁷ For example:

- [Permit to Operate a Large Public Drinking Water System – Application \[pdf\]](#)
- [Permit to Operate a Trucked Drinking Water Distribution System – Application \[pdf\]](#)
- [Water Holding Tank: Cleaning and Disinfecting \[46.14 KB !\[\]\(8d139a66f540002704b5c70b7fe6cc7a_img.jpg\)](#)
- [Well Water or Groundwater Assessment Guideline \[30.74 KB !\[\]\(c209541a4bc5f45e44bd7791f9477320_img.jpg\)](#)

The *Yukon Water Board* has specific responsibilities under the *Yukon Environmental and Socio Economic Assessment Act* (YESAA). The Board cannot issue a water use licence or set terms of a licence that are contrary to a decision document issued under that legislation. For this reason, an application for a water use licence must be accompanied by a decision document issued under YESAA.¹⁸

2.6 Who is responsible for the maintenance and upgrade of the water treatment?

Responsibilities lie with various jurisdictions, agencies, and individuals¹⁹:

Highways and Public Works, the *Property Management Agency* and *Yukon Housing Corporation* develop and operate water systems for Yukon Government-owned facilities in communities throughout the Yukon.

Most *First Nations*, both self-governing and non-self-governing, manage all or part of their water supply and distribution (trucked, private wells) to their members. Some First Nations

¹³ http://www.gov.yk.ca/services/cat_building.html

¹⁴ http://www.yukonwaterboard.ca/policy/Fees_policy.pdf

¹⁵ <http://www.eocp.ca/facilities/small-systems/>

¹⁶ <http://www.bcwwa.org/operator-training/course-descriptions.html#MSWS>

¹⁷ http://www.hss.gov.yk.ca/environmental_drinkingwater.php

¹⁸ <http://www.yukonwaterboard.ca/>

¹⁹ http://www.infrastructure.gov.yk.ca/pdf/yukon_infrastructure_status_report.pdf

also provide public drinking water access points for self-haul and trucked-water services for rural Yukoners.

Municipalities manage the water supply and distribution (piped, trucked) within municipal boundaries (this may include First Nation communities). Some municipalities also provide public drinking water access points for self-haul and trucked-water services for rural Yukoners.

Yukoners with private systems, i.e. wells (approximately 2,000 private wells)²⁰ and/or water holding tanks, are responsible for the operation and maintenance, testing, and treatment of their individual systems.

2.7 Any requirements for the water supply system?

The *Government of Yukon* approved a regulation for large public drinking water systems and bulk water delivery in August 2007 (*Yukon Drinking Water Regulation*).²¹ According to this regulation, the owner of a large public drinking system (any system that has 15 or more connections piped to a distribution system or five or more delivery sites on a trucked distribution system) is responsible for supplying and delivering safe drinking water (water that meets the health-related criteria set out in the Guidelines for Drinking Water Quality) to users.²²

Operators must obtain a permit from a health officer to operate a large water system or bulk water delivery system. Water systems that obtain water from a surface water source or use well water under the direct influence of surface water must provide treatment consisting of filtration and disinfection.

Owners must ensure that drinking water is monitored for bacteriological, chemical, and physical quality as well as for turbidity. Water testing for large public systems serving less than 500 users must be done twice a month; for systems serving 500 to 3,000 users or more, once a week.

Boil water orders are issued by health officers who may give notice of the boil water order or its rescinding or require the owner to give said notice to users.

Anyone who makes significant use of water or discharges to water typically must have a water licence from the *Yukon Water Board*. The Water Quality Section audits the water licence performance for those licensed activities that could pose a potential threat to water and any plant, animal, or person. This data is collected and tracked over time.

Water Quality staff visit and take samples at mine sites (inactive or active), municipal wastewater facilities, fish farms, and assorted other locales. Some of these samples are processed in a lab in Whitehorse.²³

3.0 Drinking Water Quality and Monitoring

3.1 Who is the lead agency for drinking water quality?

Health and Social Services is responsible for drinking water.²⁴

²⁰ http://www.infrastructure.gov.yk.ca/pdf/yukon_infrastructure_status_report.pdf

²¹ http://www.gov.yk.ca/legislation/regs/oic2007_139.pdf

²² <http://www.water.ca/wkd-guide-drink-water-1.asp>

²³ <http://www.env.gov.yk.ca/air-water-waste/waterquality.php#auditing>

²⁴ <http://www.env.gov.yk.ca/air-water-waste/waterquality.php>

3.2 Who defines water quality standards?

Drinking water quality standards are set out in the Drinking Water Regulation²⁵ of the *Public Health and Safety Act*.

Almost all Yukon communities rely on groundwater wells for their drinking water. Groundwater wells must meet strict criteria for siting, construction, and operation. National guidelines are followed for siting and, where applicable, *Yukon Water Board* approval is secured. New wells are tested against bacteriological, radiological, aesthetic, and other health-related parameters. Performance tests must be done to determine the yield of the well as well as the characteristics of the aquifer it draws from and the influence of surface water.

*Health and Social Services*²⁶ provides information about how to use, test, and develop drinking water. Also, there is information available for the Rural Domestic Well Program.²⁷ Groundwater research is underway in a number of areas in the Yukon, including a look at how climate change is affecting groundwater supplies.

Relevant Legislation

[Waters Act](#)

[Waters Act, Act to Amend](#)

[Waters Regulation](#)

[Umbrella Final Agreement](#) Between The Government Of Canada, The Council for Yukon Indians and The Government of the Yukon:

Umbrella Final Agreement: [Chapter 14 Water Management](#)

[Water Charter](#)

3.3 Who is responsible for administering drinking water regulations, if any?

Health and Social Services manages the regulation of drinking water systems.^{28,29}

3.4 Who enforces regulations, if any?

Health and Social Services (Environmental Health Services Unit) engages in inspections and enforcement services on water quality, sewage, and solid waste disposal, food quality, institutional hygiene, special events, recreational facilities, communicable disease control, and other related matters.^{30,31}

The primary duty of the Water Inspections Section of the *Environment Department* within the Yukon Government is to enforce compliance with the *Waters Act* and Regulations. This includes identifying concerns with project descriptions submitted for environmental assessment, as well recommending water use licence operating conditions, and monitoring and promoting compliance with those licences. *Water inspectors* conduct inspections on both licensed and unlicensed undertakings.³²

²⁵ http://www.gov.yk.ca/legislation/regs/oic2007_139.pdf

²⁶ http://www.hss.gov.yk.ca/environmental_drinkingwater.php

²⁷ <http://www.community.gov.yk.ca/infrastructure/rpdwa.html>

²⁸ <http://www.hss.gov.yk.ca/environmental.php>

²⁹ http://www.hss.gov.yk.ca/environmental_drinkingwater.php

³⁰ <http://www.hss.gov.yk.ca/environmental.php>

³¹ http://www.hss.gov.yk.ca/environmental_drinkingwater.php

³² <http://www.env.gov.yk.ca/air-water-waste/waterinspections.php>

3.5 Who ensures the accountability of government and water suppliers?

For licensed activities, the *Environment Department* (Water Quality Section) audits the water licence performance.

The Yukon Public Service Commission has key involvement with government accountability with respect to positions held.³³

3.6 Who is responsible for the assessment of public water supply systems? (Identify critical points within the treatment process for effective monitoring, control, and management including determining treatment efficiency in the removal or inactivation of harmful agents found in the source water.)

The *Environmental Health Services Unit*, as the regulator of public water supply quality, does assessments of all the public water supply and distribution systems in the Yukon under the Drinking Water Regulation. This will assist in determining where upgrades and improvements are needed to existing systems in incorporated and unincorporated communities.³⁴

The Water Quality Section within the Water Resources Branch undertakes a variety of activities aimed at ensuring the protection of the Yukon's natural waterways.³⁵

3.7 Any approval process for newly built water treatment systems?

Groundwater wells, on which most Yukoners rely, must meet strict criteria for siting, construction, and operation. A permit to operate the system is required under the Drinking Water Regulation. National guidelines are followed for siting and, where applicable, Yukon Water Board approval is secured.

3.8 Who is responsible for monitoring the water system? Any source water monitoring?

Drinking water system owners are required to monitor water quality under the Drinking Water Regulation. Samples are analyzed for bacteriological quality at the *Environmental Health Services Lab* in Whitehorse. Anyone who makes significant use of water or discharges to water typically must have a water licence from the *Yukon Water Board*, and licensees are responsible for monitoring the system.

The *Water Quality Section* audits the water licence performance for those licensed activities that could pose a potential threat to water and any plant, animal, or person. Data are collected and tracked over time. Water Quality staff visit and take samples at mine sites (inactive or active), municipal wastewater facilities, fish farms, and assorted other locales. Some of these samples are processed a lab in Whitehorse.³⁶

Health Canada provides funding to the Yukon Territorial Government to provide drinking water testing supplies to Yukon First Nations communities.³⁷

3.9 In case of adverse quality standards, who notifies whom (government, public, water supplier)?

³³ <http://www.psc.gov.yk.ca/ppp/accountability.html>

³⁴ http://www.infrastructure.gov.yk.ca/pdf/yukon_infrastructure_status_report.pdf

³⁵ <http://www.env.gov.yk.ca/air-water-waste/waterquality.php>

³⁶ <http://www.env.gov.yk.ca/air-water-waste/waterquality.php>

³⁷ <http://www.hc-sc.gc.ca/fniah-spnia/promotion/public-publique/water-eau-eng.php>

For wells and water supply systems, water licensees and the public contact the office of Yukon's *Medical Officer of Health*. Owners of large and bulk water delivery systems are required to notify a health office of adverse water quality under the Drinking Water Regulation.

For surface water, *Environment Yukon's Water Quality Section* and *Environment Canada's Pacific-Yukon Water Quality Monitoring and Surveillance group* should be notified of adverse water quality conditions. These groups track water quality parameters (physical variables, metal content, nutrients, and bacteria counts). Data are fed into the national Water Quality Index and become part of the Canadian Environmental Sustainability Indicator for freshwater.³⁸

4.0 Waste Management (part of source water protection as well)

5.0 Surveillance

5.1 Any process in place to respond to health complaints?

The *Office of the Yukon's Medical Officer of Health* is a consultant to the Department of Health and Social Services. Department of Health and Social Services' legislated responsibility is to protect and promote the public's health in a variety of areas³⁹:

- Communicable disease control;
- Environmental health;
- Emergency preparedness and response.

5.2 Any outbreak surveillance system in place?

Yukon Communicable Disease Control facilitates outbreak surveillance activities.⁴⁰

5.3 Any system in place to link outbreaks to source or system characteristics?

Information was not easily available on whether an outbreak surveillance system that actively links outbreaks to source or system is in place in the Yukon. Routine monitoring of drinking water quality is required under the Drinking Water Regulation. Unsatisfactory results are followed up by a *health officer*.

5.4 Who is responsible for managing outbreaks?

Yukon Communicable Disease Control manages outbreaks.

6.0 What is the Role of the Community in the Provision of Safe Drinking Water?

Managing drinking water in the Yukon is a cooperative effort between all levels of government, industry, and stakeholders, including individual Yukoners.⁴¹

The Water Stewardship Award recognizes the collective obligation of Canadians and their governments to be responsible water stewards.⁴²

³⁸ <http://www.env.gov.yk.ca/air-water-waste/waterquality.php>

³⁹ <http://www.hss.gov.yk.ca/healthofficer.php>

⁴⁰ http://www.hss.gov.yk.ca/ifo_professionals.php

⁴¹ http://www.infrastructure.gov.yk.ca/pdf/yukon_infrastructure_status_report.pdf

⁴² <http://www.env.gov.yk.ca/>

Note that while the National Collaborating Centre for Environmental Health has used its best efforts to ensure the accuracy and reliability of this information, it is provided as a general reference only. Please contact federal, provincial, municipal, and other agencies noted to verify information provided.

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