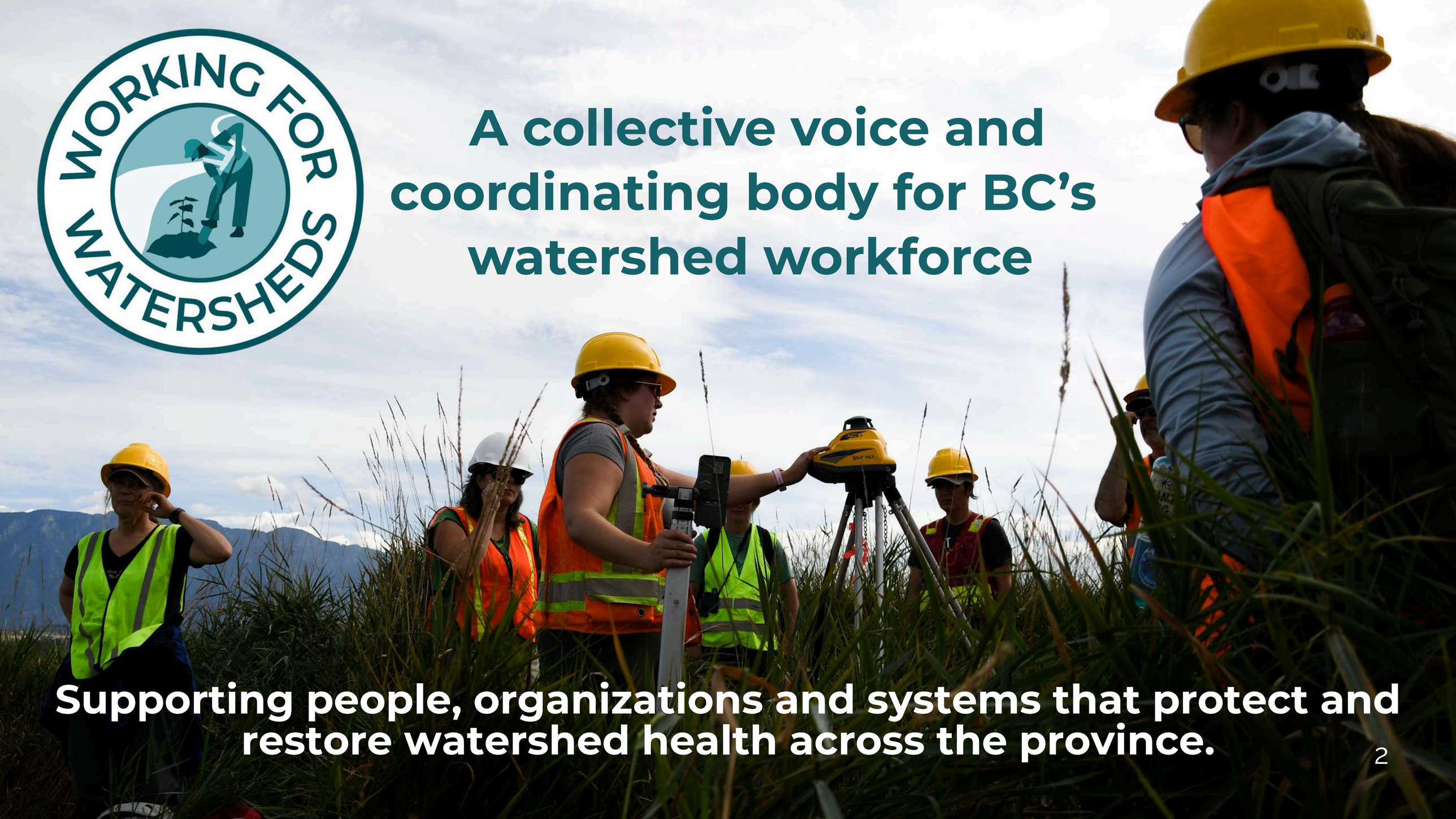
Economic Case Study Series



A collective voice and coordinating body for BC's watershed workforce

Supporting people, organizations and systems that protect and restore watershed health across the province.

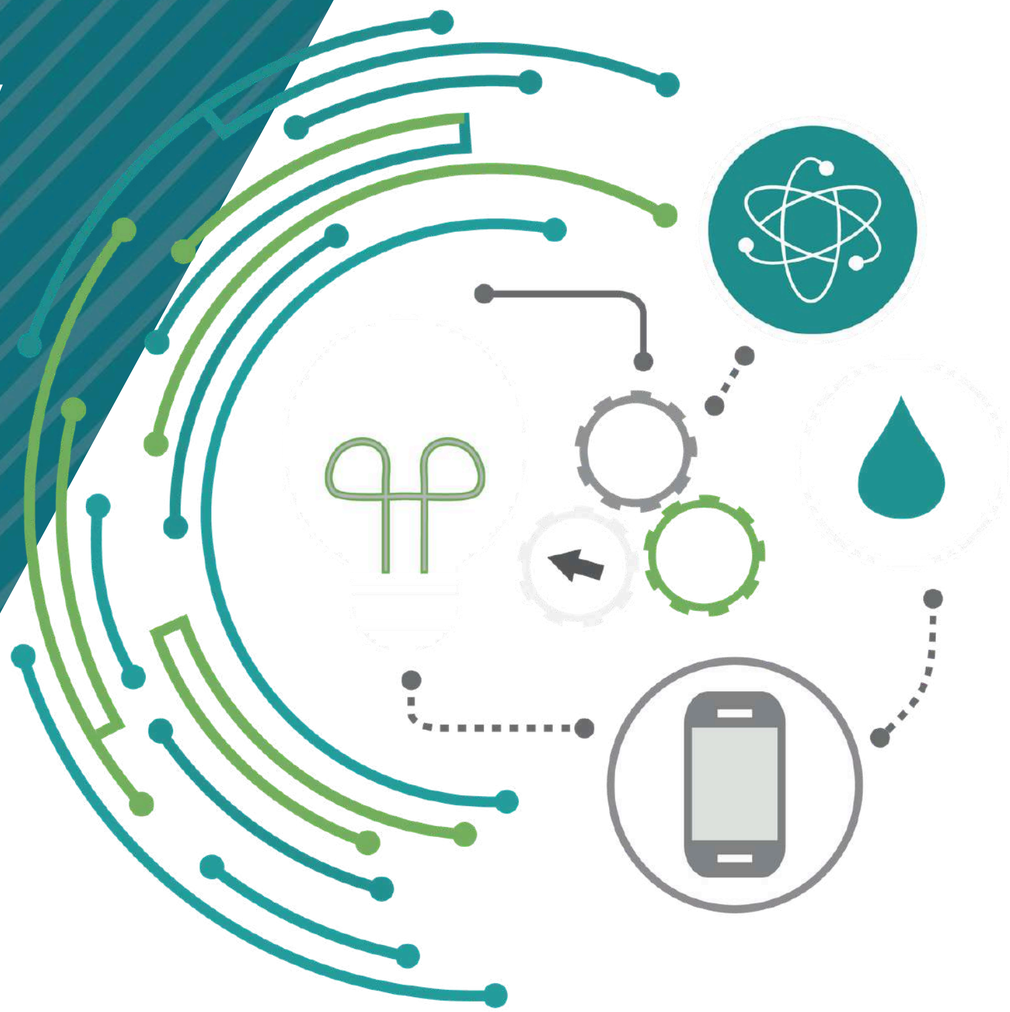
Watershed Fields

BC's watershed workforce is concentrated in six fields of operation.

Economic Case Study

Watershed Technology

Made-in-BC Solutions for a Growing Global Market



Inside this **CASE STUDY**

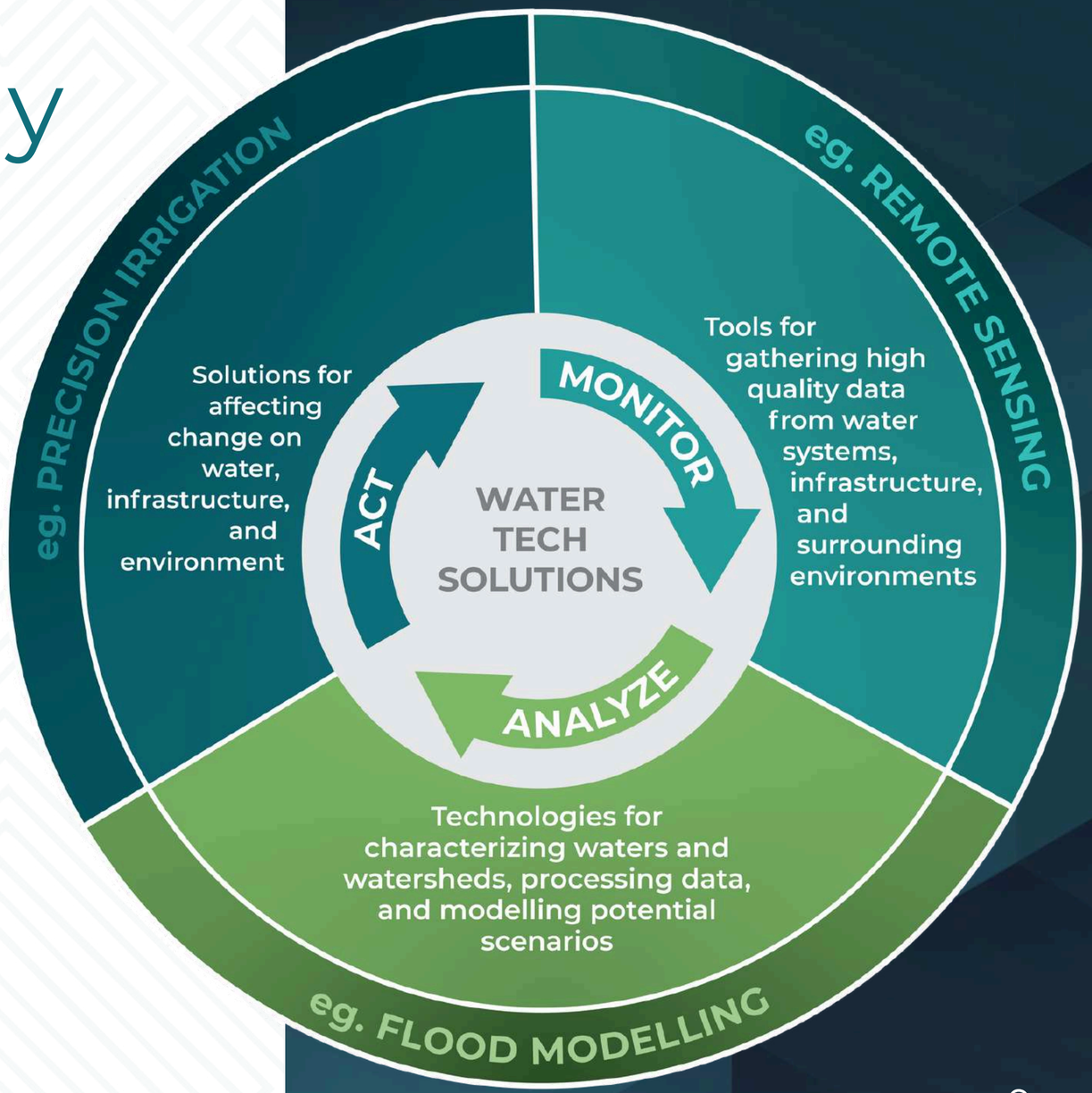
This case study highlights the role of watershed technology in BC's economy and the opportunities to grow the sector.

1. **Water Technology in BC**
2. **Economic Importance**
3. **Existing Strengths**
4. **Opportunities for Growth**
5. **Spotlight: Foundry Spatial**
6. **Key Messages & Next Steps**

1 Water Technology AT A GLANCE

Water technology refers to tools, processes, and systems that support water quality, quantity, supply, and management across the entire water cycle.

It encompasses physical, digital, and nature-based solutions that can be applied in both the built and natural environment.



Source: BC Cleantech Export Opportunities, Foresight Canada, 2025

2 Water Technology
KEY ECONOMIC & JOB STATISTICS

90
COMPANIES ACROSS BC

Driving innovation across the province - from agriculture to mining to municipal utilities.

Source: Foresight (1), 2023

59
EXPORT-ORIENTED FIRMS

Headquartered in Metro Vancouver, most are small or medium-sized enterprises expanding BC's global reach.

Source: Invest Vancouver, 2022

$508B
GLOBAL MARKET

The water and wastewater treatment segment is the largest and fastest-growing part of the global water market

Source: Precedence Research, 2025

$139B
WATER-RELATED CLIMATE RISK

Floods, droughts, and storms are projected to cost Canada $139B by 2050, water technologies help mitigate these risks.

Source: CBC, 2022

40K
ENV & CLEAN TECH JOBS

Local growth means more companies, more solutions for watershed priorities, and more skilled, high-paying local jobs

Source: BC Gov, 2023

Watershed Technology
WHERE TECHNOLOGY MEETS PLACE

Watershed technologies are a subset of tools, processes, and systems within the water technology field that support the maintenance, restoration, or improvement of healthy watersheds.

These range from sensors deployed in the natural environment to water management tools that support conservation in agriculture and resource sectors.

Watershed Technology
THE ECONOMIC CASE

>$1B

IN TOTAL PRODUCTIVITY LOSSES IN 2020

tied to water shortages

Source: CCPA, 2022

EXTREME EVENT COST:

$10.6-$17.2B

IN ESTIMATED DAMAGES

from 2021 Fraser Valley floods

Source: MECCS, 2019

- **Watersheds power BC's core industries:** Mining, natural gas, forestry and hydroelectricity all depend on reliable water supply.
- **Economic stability relies on watershed health:** Degradation directly threatens productivity, jobs, and community resilience.
- **Rising stress:** Worsening droughts are disrupting agriculture, fisheries, and municipal water supplies.

Cross Sector **IMPACT**

Watershed technology and data equips communities, industries, and governments with better information and smarter tools to sustain BC's water future. It enables:

PRODUCTIVE AGRICULTURE

Smarter irrigation, precision agriculture, and water use monitoring

SUSTAINABLE NATURAL RESOURCES

Risk management for water supply, quality, contamination, and extreme weather

EFFECTIVE WATERSHED MANAGEMENT

Flood and drought forecasting, water monitoring, and emergency response

3 Existing STRENGTHS & CAPABILITIES

Knowledge

Research & Data Leadership

BC's universities and research networks are global leaders in applied water research, technology development, and environmental monitoring. Collectively driving breakthroughs in water technology.

Community Circle mobilizes knowledge, building strength through cohesive action, partnering with Indigenous communities to strengthen health and resilience.

Community Circle

People

Skillled People & Talent Pipeline

BC's workforce is highly skilled. From hydrologists and planners to developers and entrepreneurs, the province has deep expertise in water monitoring, modelling, and treatment.

Skilled professionals, such as those in the Canadian Water Resources Association network, lend their expertise for the collective benefit of those living on Turtle Island, inspiring others to join the network.

CWRA ACRH
Canadian Water Resources Association
Association Canadienne des Ressources Hydriques

Innovation

Proven Innovation Ecosystem

BC-based companies are developing technologies to advance watershed health, from strengthening data collection and modelling to reducing water risks and usage.

Place-based thinkers drive solutions that accelerate positive development at home and beyond, such as Novion's water and climate intelligence, backed by accelerators such as Foresight Canada.

FORESIGHT CANADA

Existing **STRENGTHS & CAPABILITIES**

System

Funding	Governance	Collaboration
Funding initiatives (e.g. Innovate BC's Fast Pilot Program) have enabled water-focused pilots projects to test monitoring, treatment, and planning technologies, transforming local innovation into global exports.	BC's watershed tech sector benefits from emerging collaborative governance models (e.g. Cowichan Watershed Board) that link Indigenous governments, municipalities, provincial agencies, and watershed organizations.	BC's watershed technology ecosystem is strengthened by partnerships among communities, Indigenous governments, researchers, and industry. It is supported by collaborative networks such as Working for Watersheds.

4 Opportunities **FOR GROWTH**

BC's water technology sector is expanding, driven by research and commercialization expertise and a collaborative, watershed-based approach.

While the province has strong research and business foundations, the sector's growth is dependent on opportunities in domestic adoption, export markets, and workforce development

Opportunities **FOR GROWTH**

1

Grow Innovation Capacity

To effectively respond to water and climate risks, it is critical to improve our understanding of watershed technology gaps and strengthen the capacity of decision makers to utilize emerging tools.

2

Deploy Technologies

Government and industry must scale pilot, testing, and procurement programs to accelerate deployment of watershed technologies and reduce the risk of adoption across the province.

Opportunities **FOR GROWTH**

3

Reach Export Markets

Provincial and federal governments must strengthen export development and market access supports to help BC watershed technology firms expand internationally and deliver globally relevant solutions.

4

Build the Workforce

Governments, educational institutions, and industry must expand training pathways, applied skills programs, and funded work placement opportunities, such as internships and apprenticeships, to build the skilled watershed workforce needed to meet growing demand.

5 Spotlight

FOUNDRY SPATIAL

FOUNDRY SPATIAL

FROM BC PILOT TO INTERNATIONAL REACH

Foundry Spatial is a BC-based water technology company that transforms complex water data into actionable intelligence.

For over 15 years, the company has delivered decision-support tools for regulators, municipalities, and industry across BC, Alberta, and California.

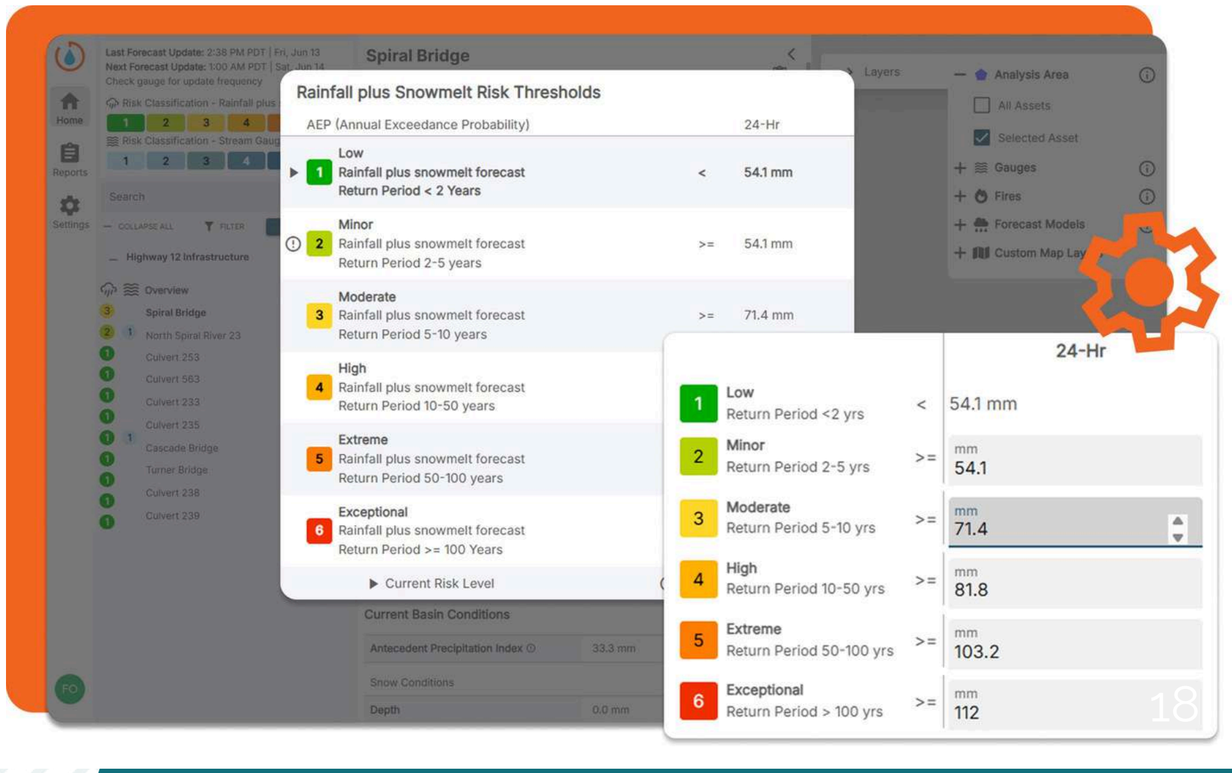
FOUNDRY SPATIAL

FLUX FORECAST

POWERED BY FOUNDRY SPATIAL

Flux Forecast, the flagship product, provides site-specific flood risk intelligence for critical infrastructure.

It helps pipeline operators and municipalities anticipate when conditions are most likely to become significant across the locations they're accountable for.



FOUNDRY SPATIAL

EARLY 2010s

PILOT DEVELOPMENT

Foundry Spatial partners with regulators to build the Northeast Water Tool, the first decision-support tool enabling evaluation of water rights applications in Northeast BC.

2014 to 2018

PUBLIC PORTALS LAUNCHED

Public demand for freshwater monitoring drives development of a consolidated water data visualization platform, regional decision-support tools across 70% of BC, and a tool covering 50% of Alberta.

2016 to 2020

FUNDING SUPPORTS GROWTH

NSERC-supported research develops new methods for modelling streamflow depletion from groundwater pumping, leading to NRC-IRAP funded development of the next-generation water tool.

2020 to 2025

COLLABORATION SUPPORTS INNOVATION

Collaboration with The Nature Conservancy, Trout Unlimited, and the State of California produces a decision-support tool for evaluating impacts on in-stream flows from proposed water rights.

2023 to TODAY

SCALABLE FLOOD INTELLIGENCE

Flux Forecast applies foundational watershed analytics to deliver an early warning system for extreme precipitation events across North America.

FOUNDRY SPATIAL

ECONOMIC SNAPSHOT

Employees	12
Estimated Revenue	< $5M
Market Reach	Canada & USA
Audience	Government, Industry, NGO
Intellectual Property	Patent Pending (CAN/USA), Referred journal articles, Open-source software packages
Funding Support	NRC-IRAP, BDC, Foresight Canada, Tecterra

FOUNDRY SPATIAL

"Where our solutions have been implemented, we've seen step changes in the decision-making process and discourse about water resources and the natural environment."

- Ben Kerr, CEO

FOUNDRY SPATIAL

CHANGING WATER-DECISION MAKING

The Northeast Water Tool generated reports valued at nearly $24M in 2025, much of it accruing to the environment by ensuring every water allocation decision accounts for environmental flow needs.

Automation replaces 60 - 100 hours of expert analysis per report, freeing hydrologists for site-specific challenges

Tool generates reports valued at

$24 Million

in 2025

FOUNDRY SPATIAL

SYSTEMATIC WATER MANAGEMENT

Consistent scientific rules applied across thousands of water allocation decisions reduces reliance on variable one-off judgements.

The result is more transparent, defensible water governance for regulators, for watersheds and for the communities that depend on them.

Providing transparency through technology-driven consistency

FOUNDRY SPATIAL

TANGIBLE IMPACTS

CLIMATE RESILIENCE

In 2021, the atmospheric river that devastated southwestern BC became the catalyst for Flux Forecast.

Had the platform existed, communities like Merritt would have had 48-72 hours of warning instead of 12.

Today that capability is live, and operators are already acting on it before conditions turn dangerous.

WATER GOVERNANCE

Yahey v. BC (2021) court ruling and agreement mandates new frameworks to protect treaty rights from cumulative impacts.

The Enhanced Decision Support Tool operationalizes the agreement via weekly flow estimates and withdrawal limits.

Mandatory reporting ensures a more protective, data-driven framework for environmental flows.

FOUNDRY SPATIAL

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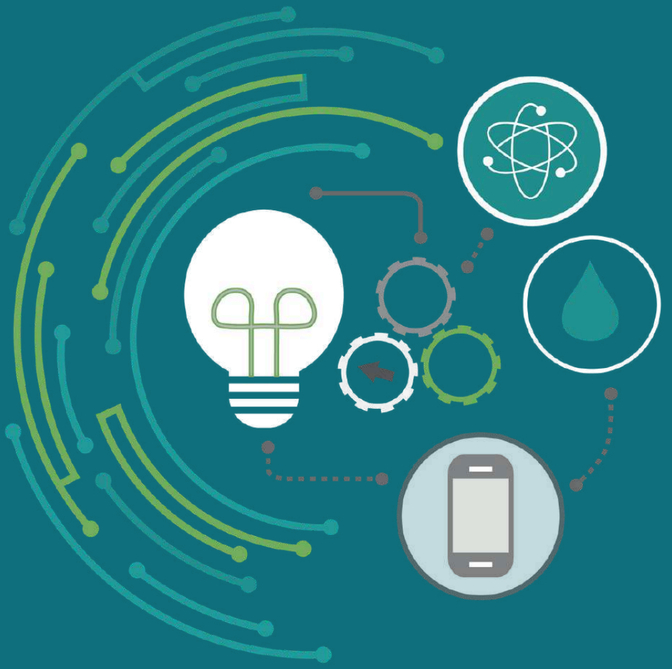
6 Key MESSAGES



1. Water Tech Is an Economic Driver

BC's water innovation capacity generates high-skilled jobs, attracts investment, and creates exportable technology and expertise that supports provincial priorities.

2. BC Has the Strength to Lead

With 90 companies, strong research institutions, engineering talent, and enabling organizations, BC already has a well-established sector positioned to compete in a $508B global market.

3. The Sector Is Ready to Grow, with Workforce as the Catalyst

Strategic alignment, real-world deployment, export development, and most critically, workforce investment will accelerate BC's leadership in water technology.

What's **NEXT?**

BC's watershed technology sector is ready to grow, with a strong watershed workforce as its catalyst.

Working for Watersheds brings together industry, governments, researchers, and communities to strengthen this workforce.

Together, we can build the talent needed to sustain BC's water future.

Connect with us to explore collaboration and partnership opportunities.

Stay Connected

Sign up for our newsletter

workingforwatersheds.ca

LEARN MORE

Curious what a career in Watershed Tech looks like?

Meet a true entrepreneur in the field.

Click Here

Entrepreneur.

Problem solver.

Passionate water advocate.

Partners and **ACKNOWLEDGEMENTS**

This case study was developed with the support of partners advancing watershed technology and workforce development in British Columbia.

Funding Partners

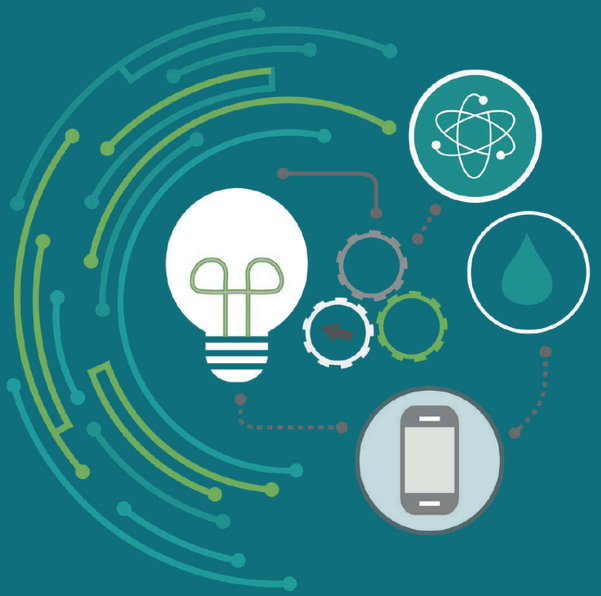
FORESIGHT CANADA

RBC Foundation

Business Spotlight

FOUNDRY SPATIAL

Key **REFERENCES**



1. BC Cleantech Export Opportunities, Foresight Canada, 2025
2. Canada's Ventures to Value Chains, Foresight Canada (1), 2023
3. Water Tech: The Metro Vancouver Region's Untapped Clean Tech Opportunity, Invest Vancouver, 2022
4. Water and Wastewater Treatment Market Size, Share and Trends, Precedence Research, 2025
5. Floods, droughts, storms will cost Canadian economy $139B in next 30 years CBC, 2022
6. Climate and Water Toolkit, Foresight (2), 2023
7. Cleantech Sector in British Columbia, BC Gov, 2023
8. Preliminary Strategic Climate Risk Assessment for British Columbia, MECCS, 2019
9. The economic costs of BC's extreme weather in 2021, CCPA, 2022

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