



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

METEOROLOGY CAREERS AT THE METEOROLOGICAL SERVICE OF CANADA

Who we are, what we do and how
you can apply



MSC: WHO WE ARE

- Division of the federal department Environment and Climate Change Canada
- **Official source** of weather warnings in Canada
- Principal scientific authority for standards, information and advice on the past, present and future state of the atmosphere (weather and climate), hydrosphere (lakes and rivers) and cryosphere (snow and ice)



MSC: WHO WE ARE

WHY WORK FOR THE METEOROLOGICAL SERVICE OF CANADA?

- Varied career opportunities: Public, aviation, ice and military operational forecasting. Research, development, service delivery, training, air quality, climatology, atmospheric modelling, etc.
- Salary
- Good benefits
- Job security
- Many advancement opportunities!



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MSC: WHO WE ARE

METEOROLOGIST CAREER PATHS

- Operational
- Services
- Development (R&D)
- Training
- Management



OPERATIONAL METEOROLOGISTS

THERE ARE FOUR FORECAST PROGRAMS IN CANADA



Storm Prediction Centres (SPCs):

- Gander, NL
- Dartmouth, NS
- Montreal, QC
- Toronto, ON
- Winnipeg, MB
- Edmonton, AB
- Vancouver, BC

Aviation Centres (CMACs)

- Montreal, QC
- Edmonton, AB

Ice Services

- Ottawa, ON

Aviation And Defence Weather Services

- Halifax, NS
- Gagetown, NB
- Esquimalt, BC



OPERATIONAL METEOROLOGISTS

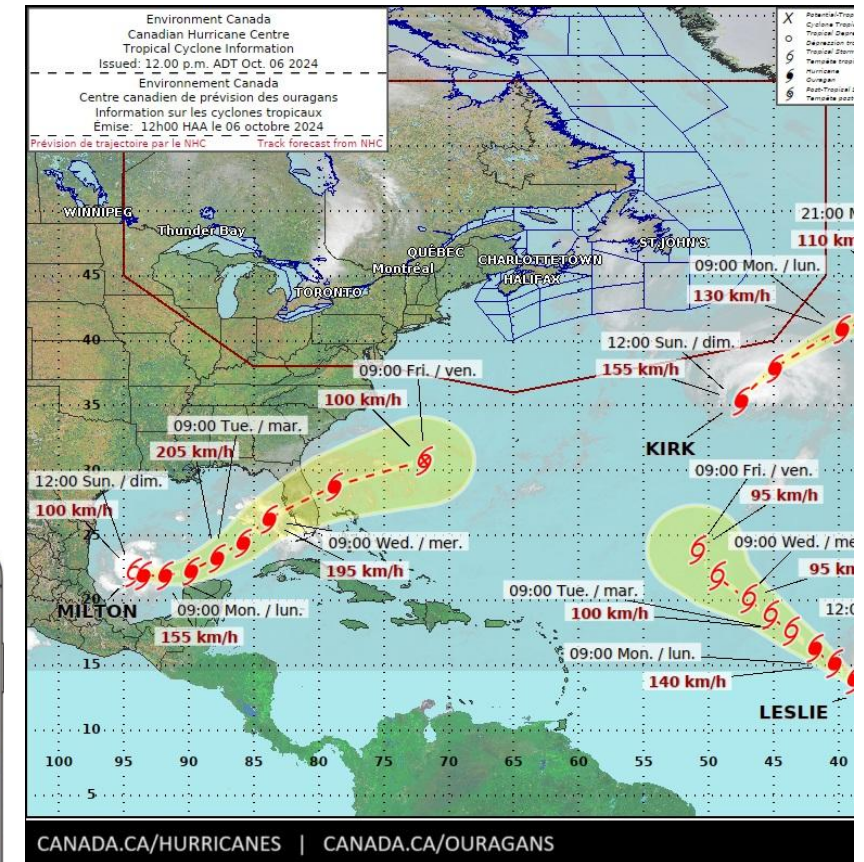
STORM PREDICTION CENTRES



OPERATIONAL METEOROLOGISTS

ROLES OF THE SPC

- High impact weather and public, marine and air quality forecasts
- All alerts (special weather statements/ advisories/ watches/ warnings)
- Communication with media / Emergency services / the public
- Everyday weather:
 - Occurrence, type & quantity of precipitation
 - Visibility (fog, blowing snow)
 - Cloud cover
 - Temperature
 - Wind speed/direction



OPERATIONAL METEOROLOGISTS

Canadian Meteorological Aviation Centres (CMAC)

- CMAC-East in Montreal, QC
- CMAC-West in Edmonton, AB



OPERATIONAL METEOROLOGISTS

ROLES OF THE CMAC

- Forecast weather for the aviation industry:
- Take-off/landing conditions at ~200 airports across Canada
- Communication of weather risks to safety of the air navigation system
- Turbulence
- Convection
- In-Flight Icing
- Volcanic Ash
- Wind Shear/Gusts
- Low ceilings and visibilities

TORONTO/LESTER B. PEARSON INTL/ON

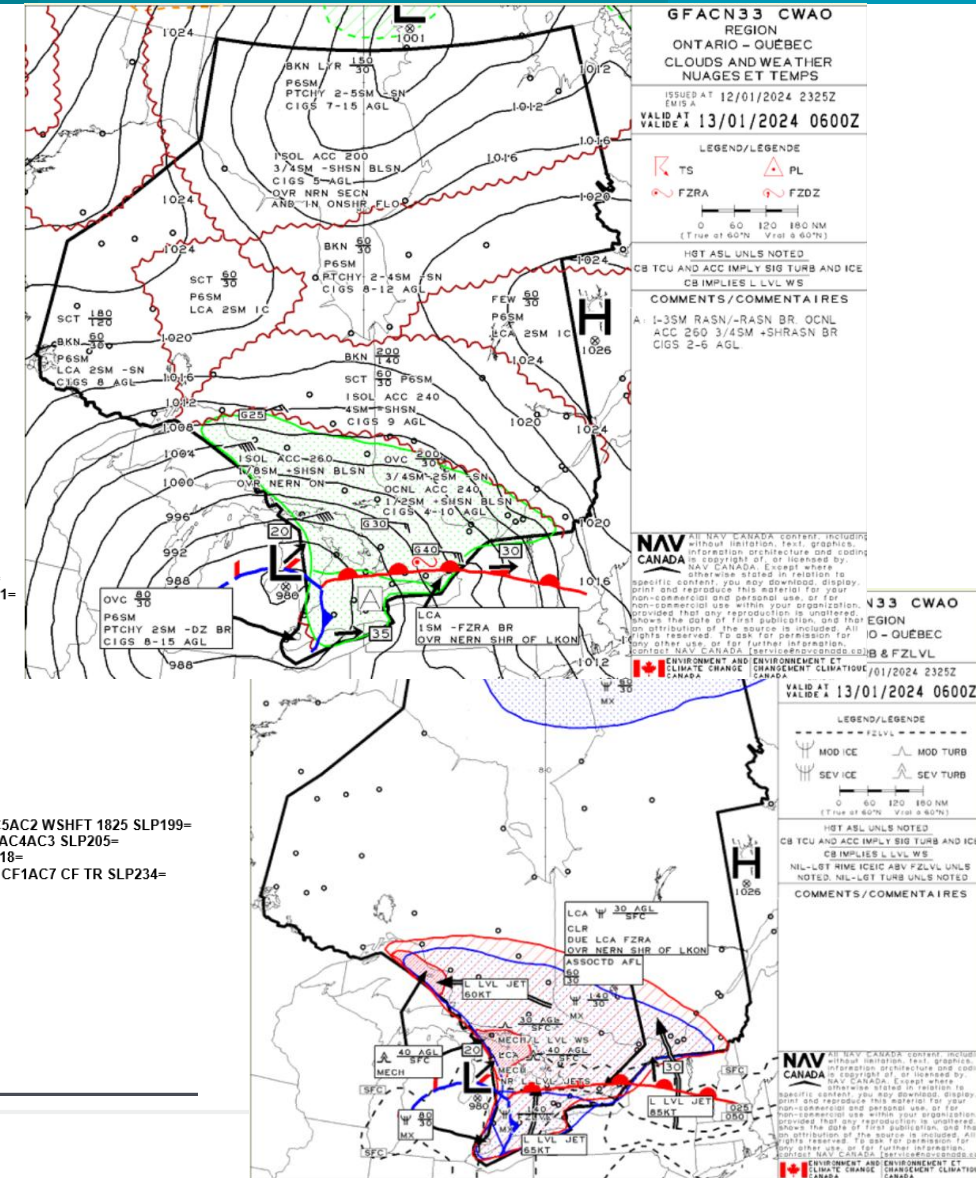
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0318/0320 6SM BR SCT008 OVC010
FM032000 12005KT 2SM -RA -DZ BR SCT003 OVC005 TEMPO 0320/0402 6SM
BR PROB30 0320/0402 3/4SM -RA BR OVC003
FM040200 VRB03KT 5SM -DZ BR SCT008 OVC010
FM040400 35010KT P6SM FEW008 BKN010 BKN030
FM041100 36010KT P6SM BKN015
FM041600 02012KT P6SM SCT025
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MONTREAL/PIERRE-ELLIOTT-TRUDEAU INTL/QC

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6SM -SHRA BR BKN020 OVC030
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-RA BR OVC008
FM040300 03010G20KT 5SM -RA BR OVC006 TEMPO 0403/0409 21/2SM -RA
BR OVC006
FM040900 01010G20KT 6SM -DZ BR SCT008 BKN020 OVC040
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OPERATIONAL METEOROLOGISTS

AVIATION AND DEFENCE WEATHER SERVICES



OPERATIONAL METEOROLOGISTS

ROLE OF AVIATION AND DEFENCE WEATHER SERVICES

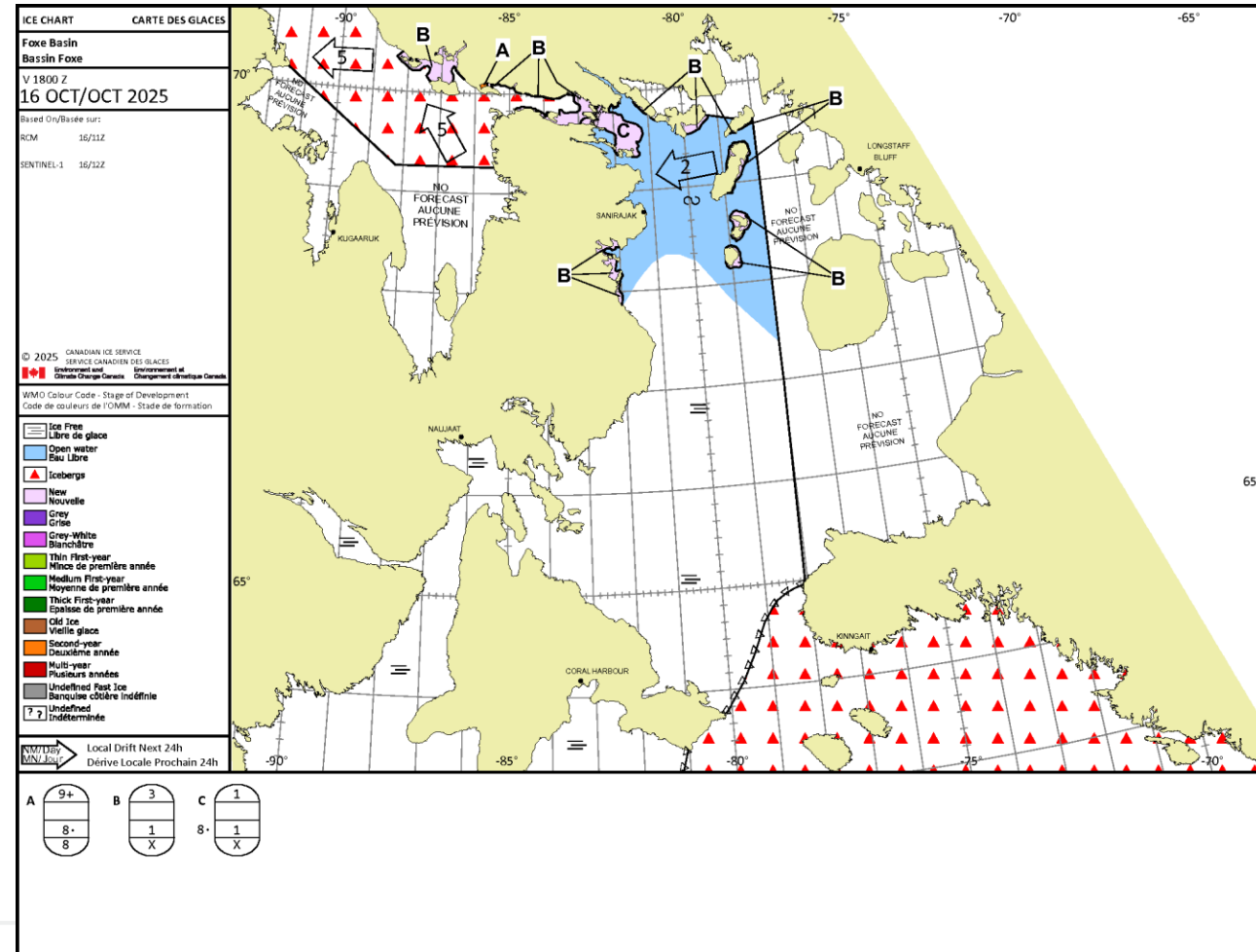
- Geographic forecast areas vary around the globe to support current DND activities
- Mixture of aviation, marine and public forecast types
- To work in this section, all employees must obtain “SECRET” security level clearance



OPERATIONAL METEOROLOGISTS

CANADIAN ICE SERVICE OTTAWA, ON

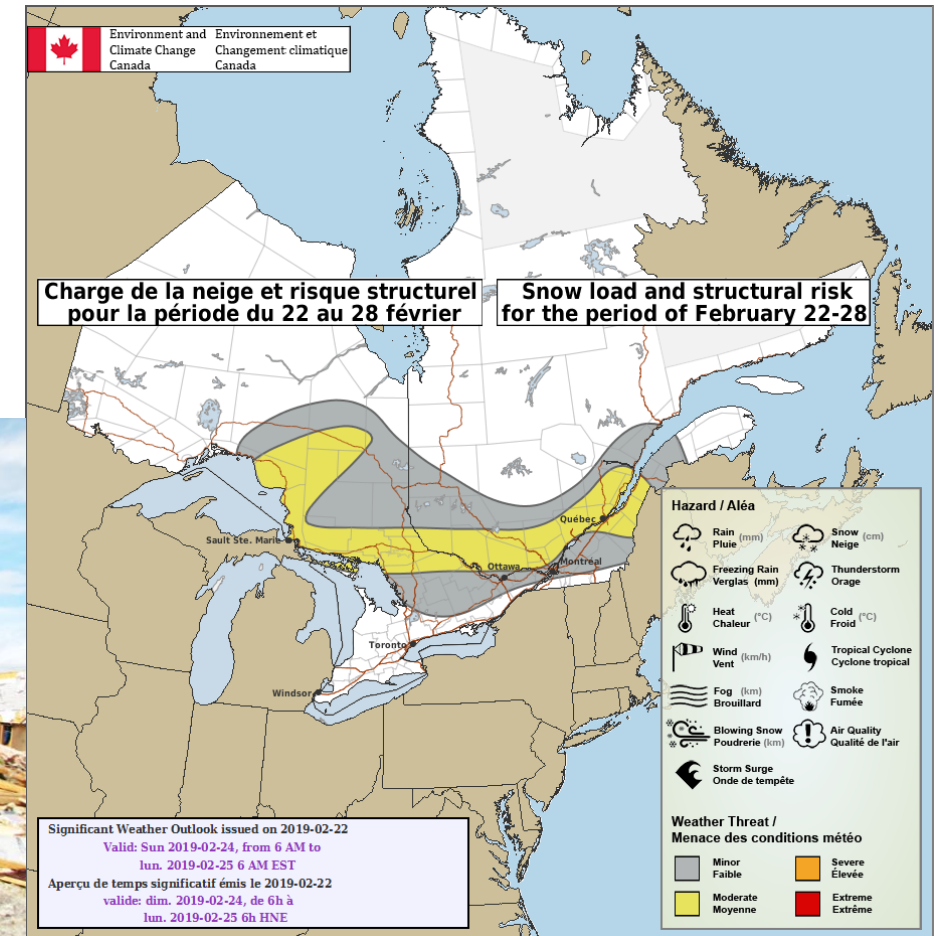
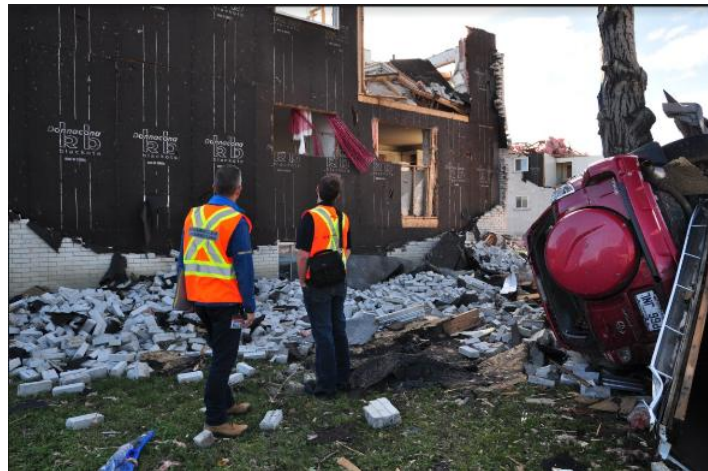
- Leading authority for ice and iceberg information in Canada's navigable waters (sea, lake, river and ocean)
- Provide information about dangerous ice conditions to clients, produce charts
- Provides essential ice knowledge to support sound environmental policies



SERVICES METEOROLOGISTS

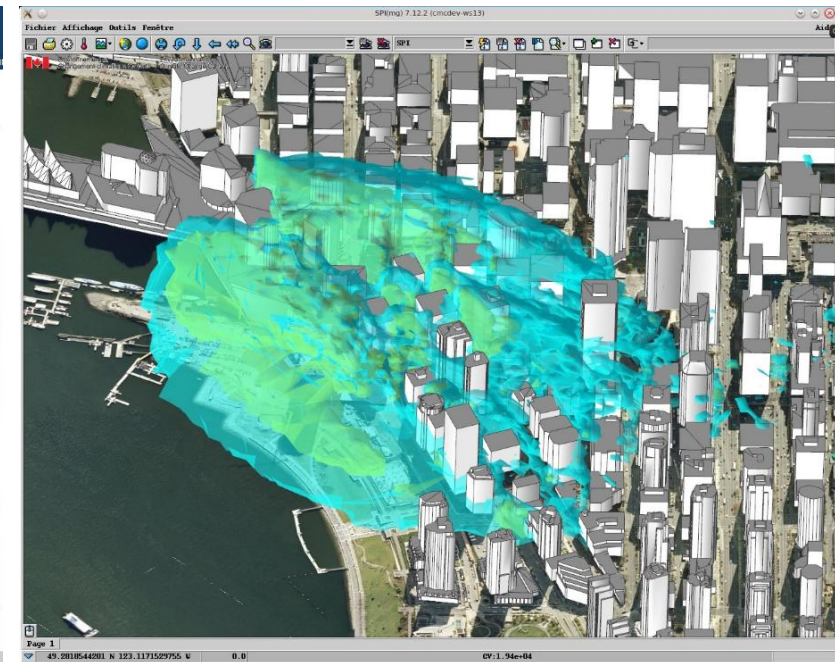
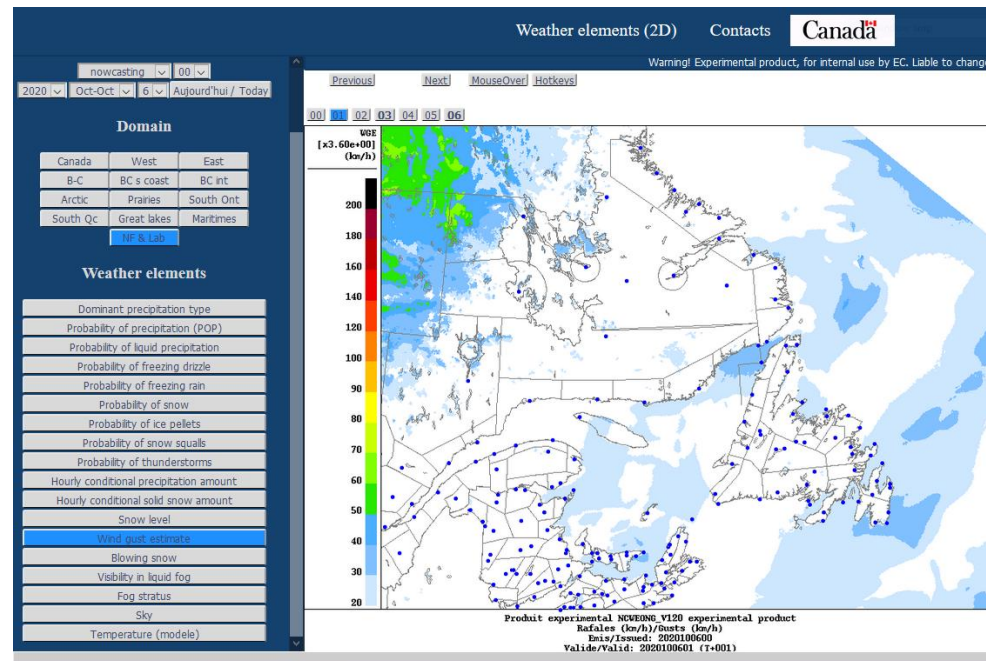
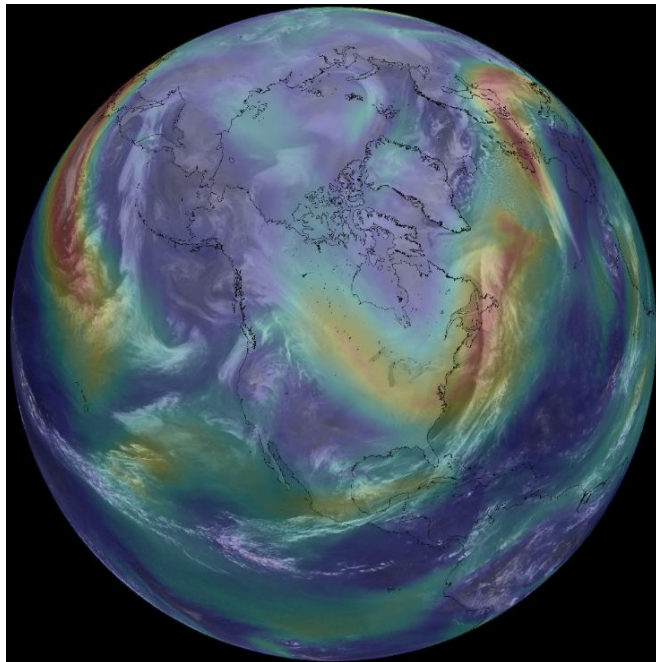
CLIENT SERVICE OPERATIONS

- Staffed by Warning Preparedness Meteorologists (WPMs) and Program Meteorologists across Canada
- Provide decision support services to major clients, including emergency management organisations, provincial and national government groups, and media
- Communicate risk



RESEARCH METEOROLOGISTS (R&D)

- Work in developing/improving numerical weather prediction models, AI models, post-processing, algorithms, products and forecasting tools used by operational meteorologists
- Collaborate with operational meteorologists to validate all of the above



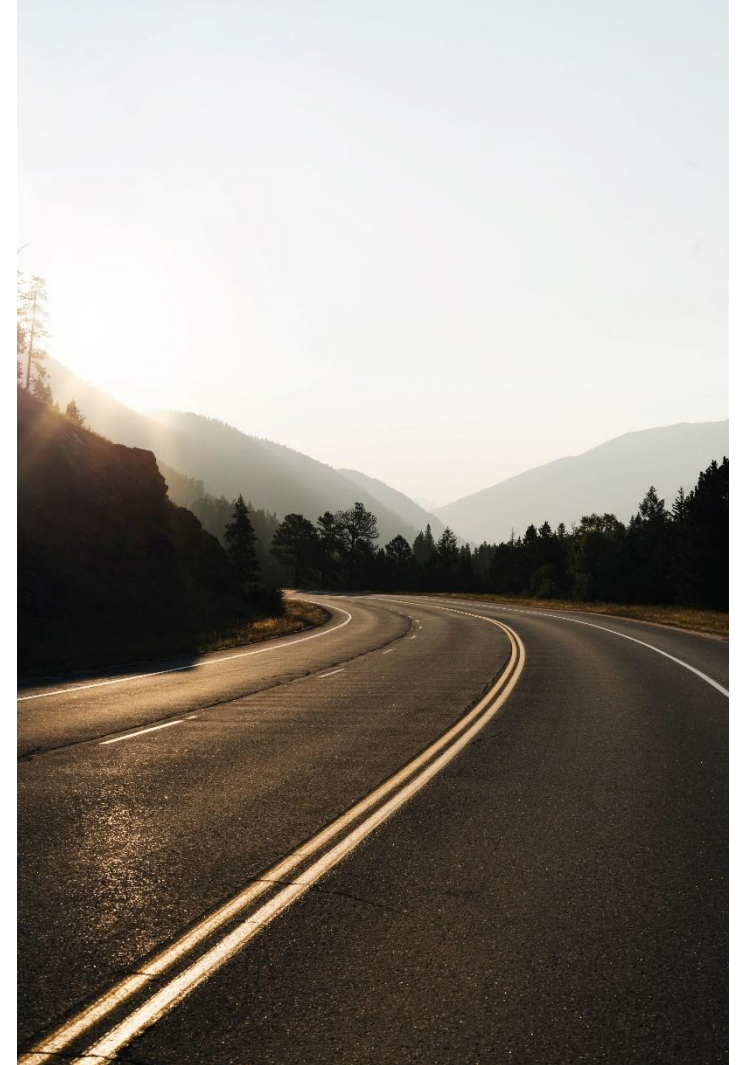
BECOMING A METEOROLOGIST WITH THE MSC

Education Requirements

Degree: Graduation with a science degree (bachelor) from a recognized post-secondary institution with acceptable specialization in meteorology, physics and mathematics.

Courses:

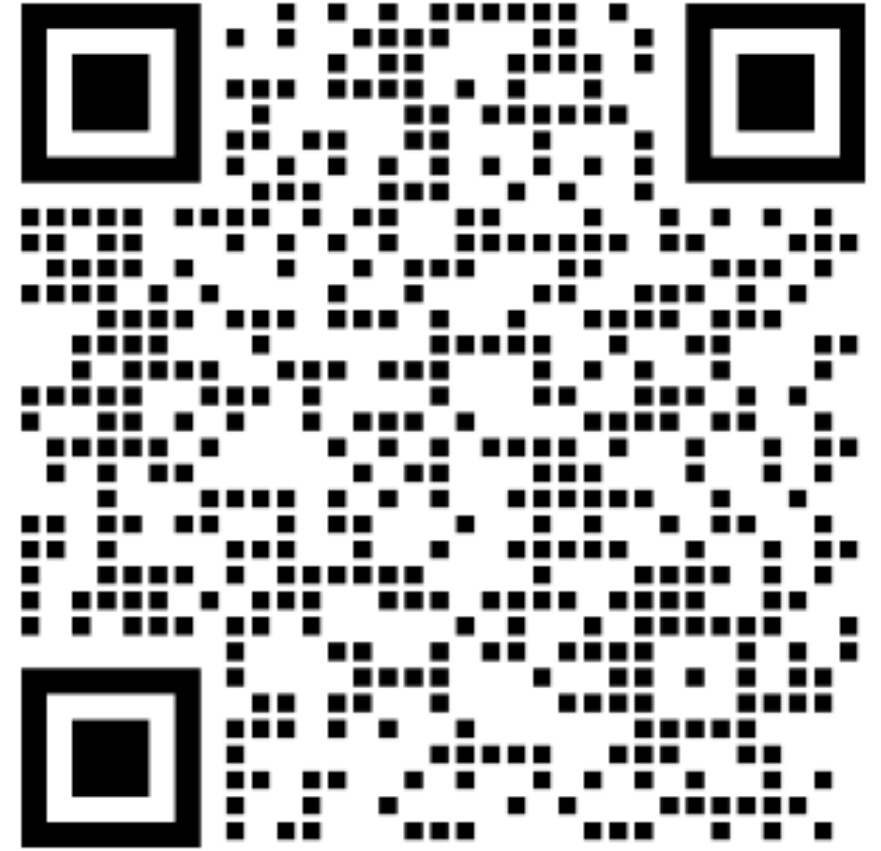
- Minimum of 10 (total) academic term courses in physics and mathematics
- A course focused on dynamic meteorology
- A course focused on thermodynamic meteorology
- A course focused on synoptic meteorology
- Three (3) other meteorology-related courses



BECOMING A METEOROLOGIST WITH THE MSC

ECCEC Meteorology Awards

- 20 scholarships available per year
- Individual value of **\$5,000 – \$10,000**
- 3 categories of awards:
 - Students entering a **Meteorology certificate/diploma program** at UBC, York, McGill, Dalhousie, or UQAM
 - Students enrolled in a **BSc with specialization in atmospheric science** at UManitoba, UBC, York, McGill, or UQAM
 - Students enrolled in a **BSc program** at any of the above universities who are interested in exploring meteorology



BECOMING A METEOROLOGIST WITH THE MSC

CONDITIONS OF EMPLOYMENT

- Shift work (day, evening, night, weekends, holidays) on a 24/7 basis;
- Presence required at the working desk for the entire shift or operational training;
- Mobility to various offices across Canada is a requirement of the job in order to respond to the Meteorological Service of Canada operational needs. (5 year clause)
- Who can apply: *Persons residing in Canada and Canadian citizens residing abroad.

*Preference will be given to veterans first and then to Canadian citizens and permanent residents



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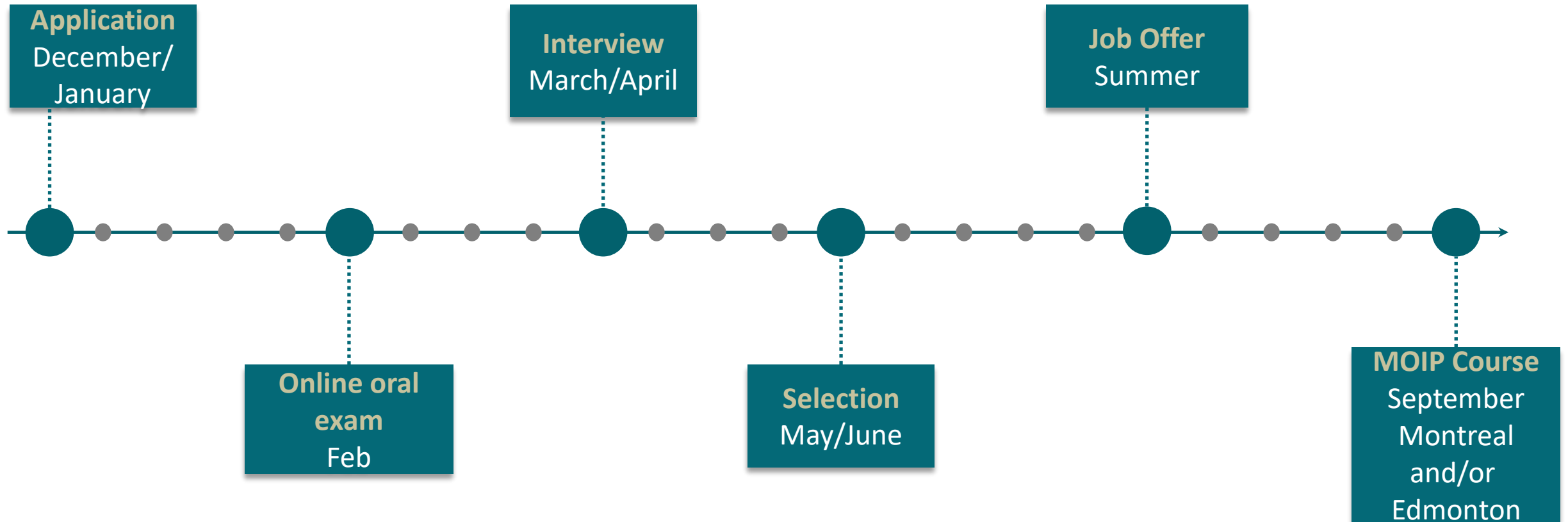
Diversity, Employment Equity and Assessment Accommodation

- ECCC seeks to ensure that recruitment strategies are fair and accessible to members of the 4 EE groups: women, persons with disabilities, Aboriginal/Indigenous People, and visible minorities
- Candidates belonging to any of the above groups are encouraged to self-declare on their application
- Assessment accommodation measures are available to candidates who require and request



BECOMING A METEOROLOGIST WITH THE MSC

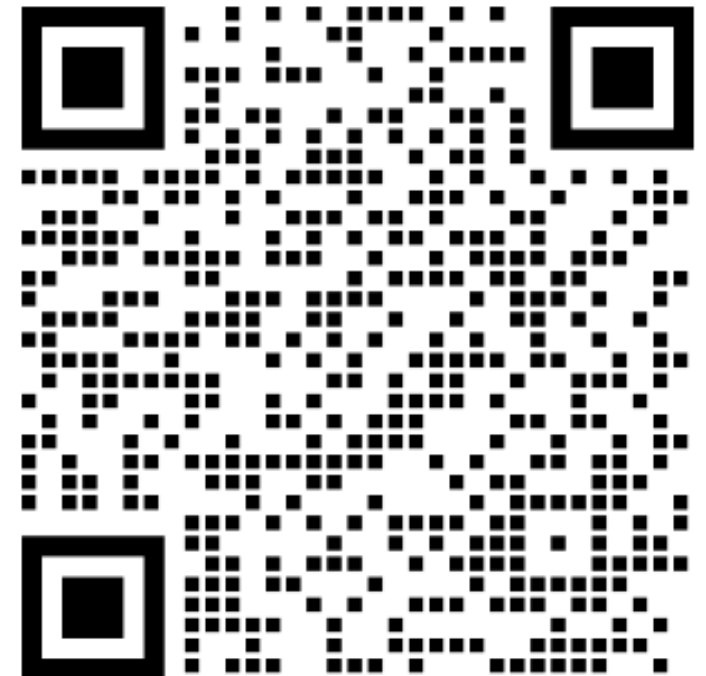
Application Process



BECOMING A METEOROLOGIST WITH THE MSC

Initial Application

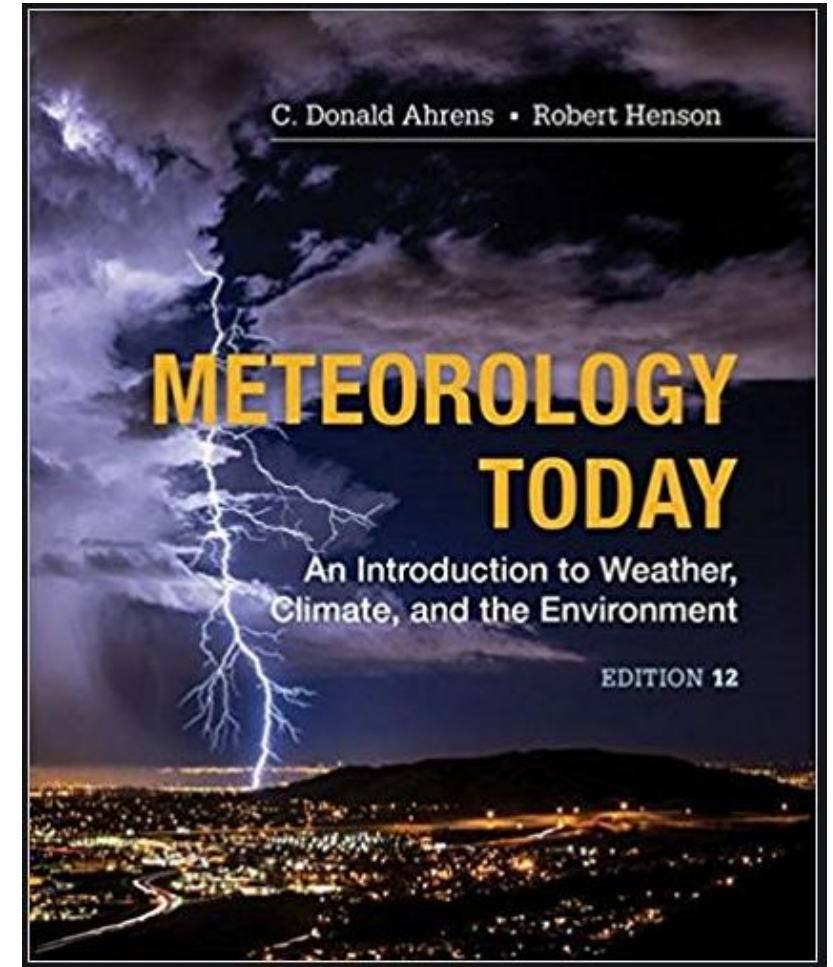
- The MT-01 job advertisement usually gets posted on the GC Jobs website in December or January each year
- If you aren't applying this year, create an account with GC Jobs and set up e-mail alerts for MT jobs open to the public



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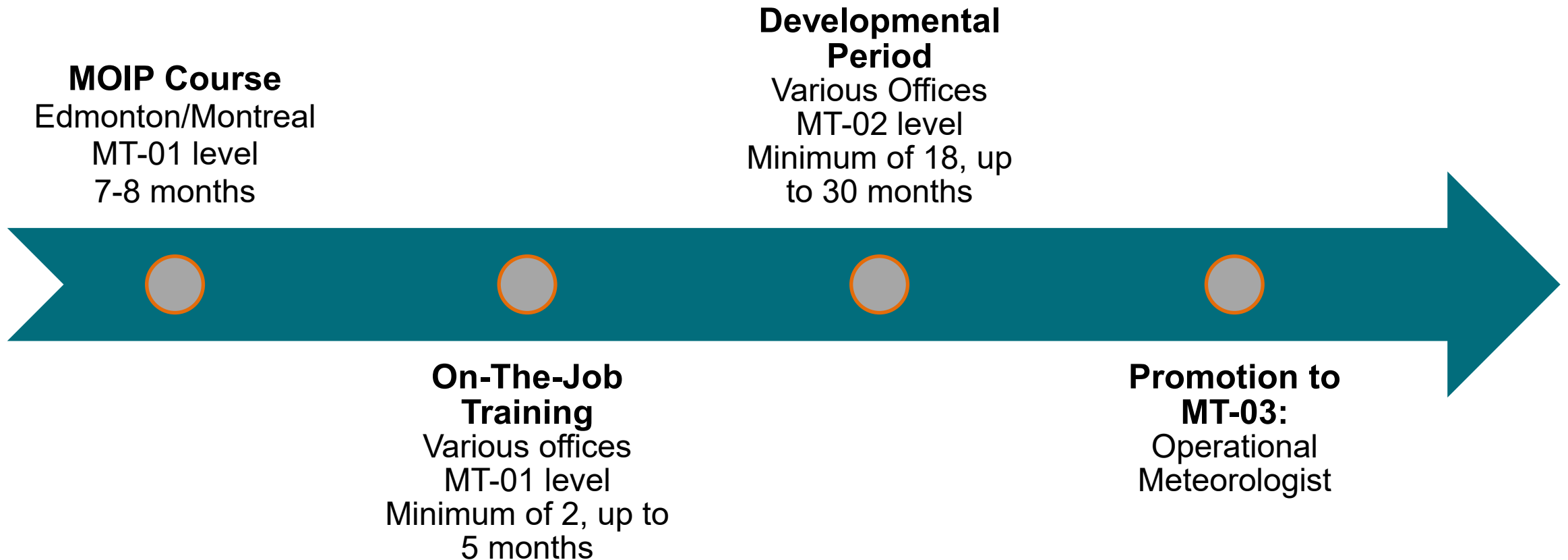
Assessments

- Knowledge of meteorological theory
 - Oral exam online
- Behavioural competencies
 - Interview (Communication, Working with others, Adaptability, Initiative, Thinking, Client focus, Demonstrating integrity and Respect)



BECOMING A METEOROLOGIST WITH THE MSC

Meteorologist Occupational Development Program



BECOMING A METEOROLOGIST WITH THE MSC



MOIP COURSE

- Paid 7 to 8 month training program (MT-01 level)
 - During the course, you are asked to fill out a survey stating where in Canada you would like to be posted; postings based on organizational needs
 - You will be in a mobility pool for 5 years (or until you earn a promotion)
- * Hiring numbers are subject to approval based on organizational needs.



BECOMING A METEOROLOGIST WITH THE MSC

Interested in an R&D career?

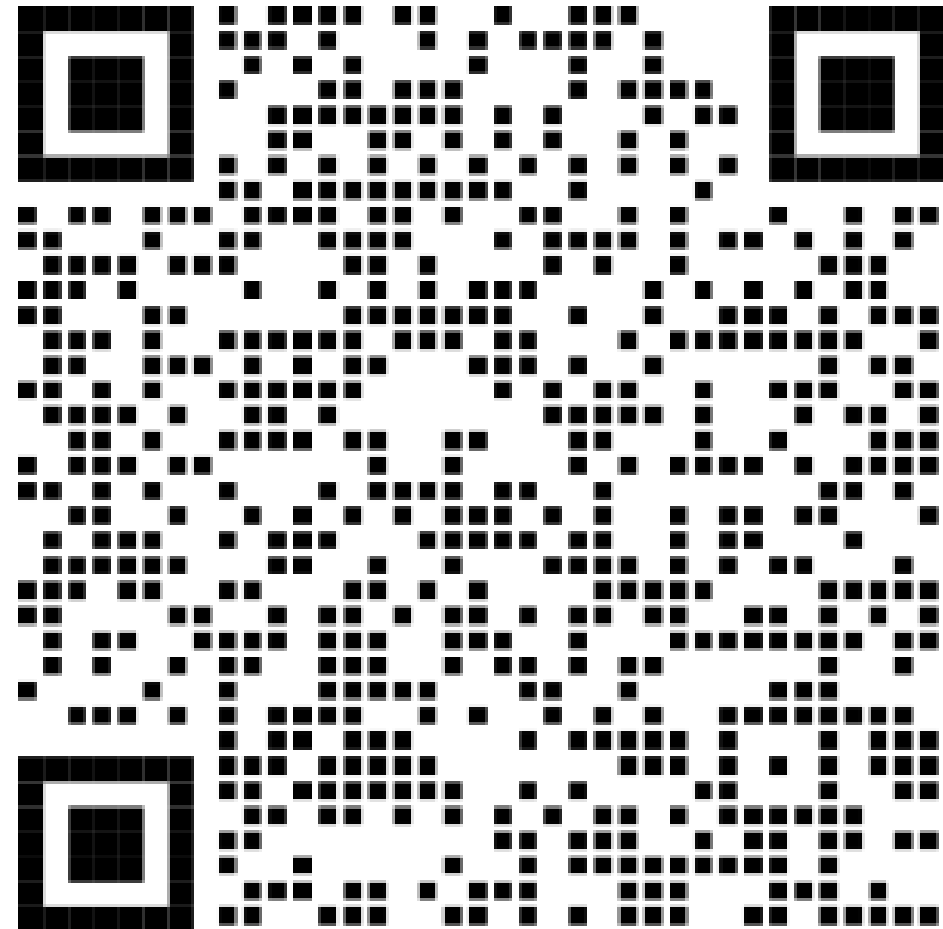
- Once again this year, we will be identifying candidates for a special development stream, who will be prioritized for an R&D position after they have reached the MT-03 level
- Same training as others, but the opportunity to also be mentored by a senior R&D meteorologist as part of the MT-02 developmental phase
- Ideal for candidates with MSc/PhD, or experience with computer programming and scientific projects
- If interested, make sure you note this in your cover letter when you apply



BECOMING A METEOROLOGIST WITH THE MSC

Direct Entry for MT-02 and MT-03

- Option for anyone with at least 2 years of recent full time operational weather forecasting experience as a meteorologist
- Must demonstrate that they already have part or all of the knowledge and skills taught during our in-house training program in operational forecasting



QUESTIONS?

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RecMT01@ec.gc.ca

Sarah Marcil
MOIP Instructor
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Become a Meteorologist at Environment and Climate Change Canada



Join us as an Operational Meteorologist, an important part of the Meteorological Service of Canada (MSC).

Explore your new career with us



[Who we are](#)



[What we offer](#)