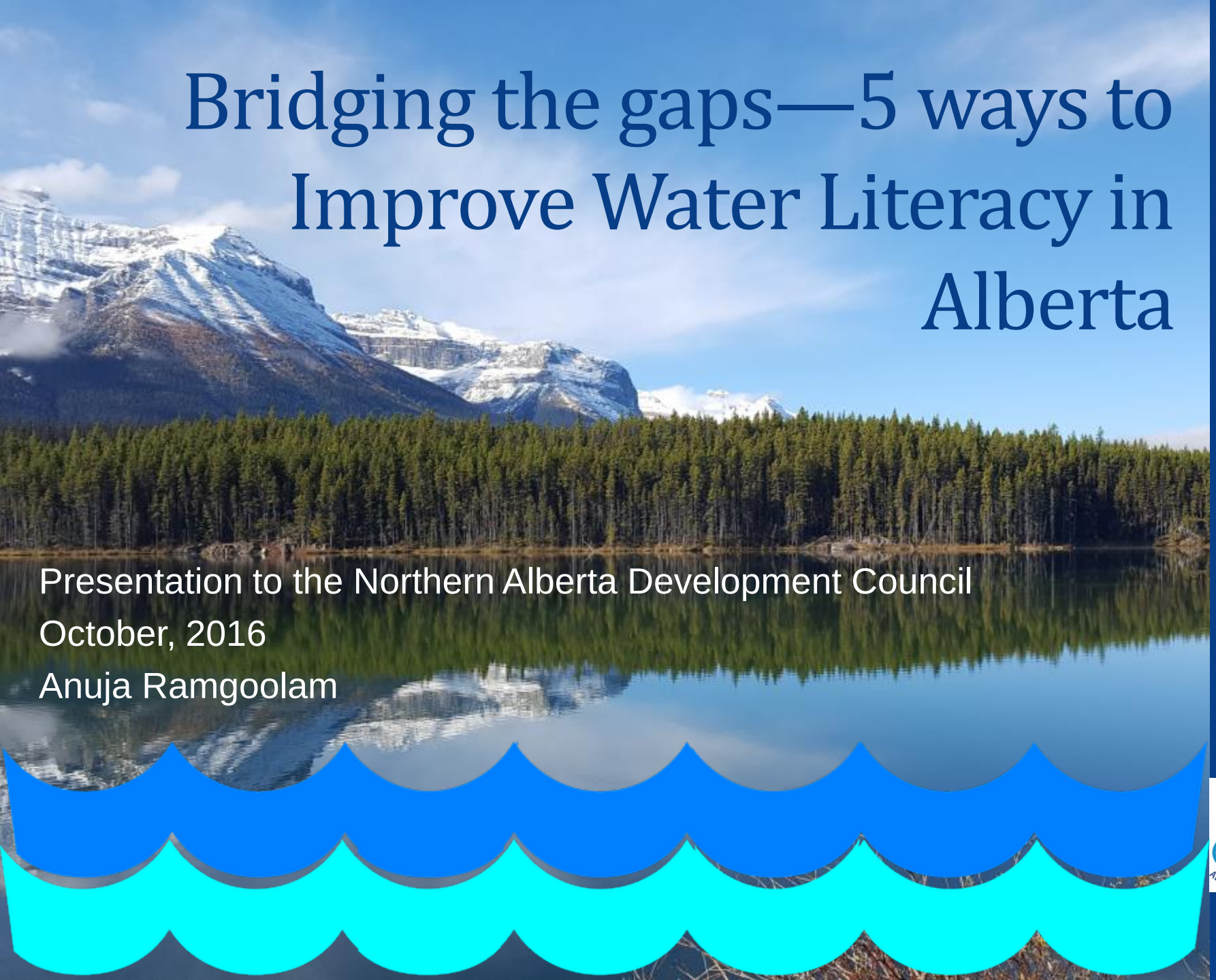
Bridging the gaps—5 ways to Improve Water Literacy in Alberta



Presentation to the Northern Alberta Development Council

October, 2016

Anuja Ramgoolam

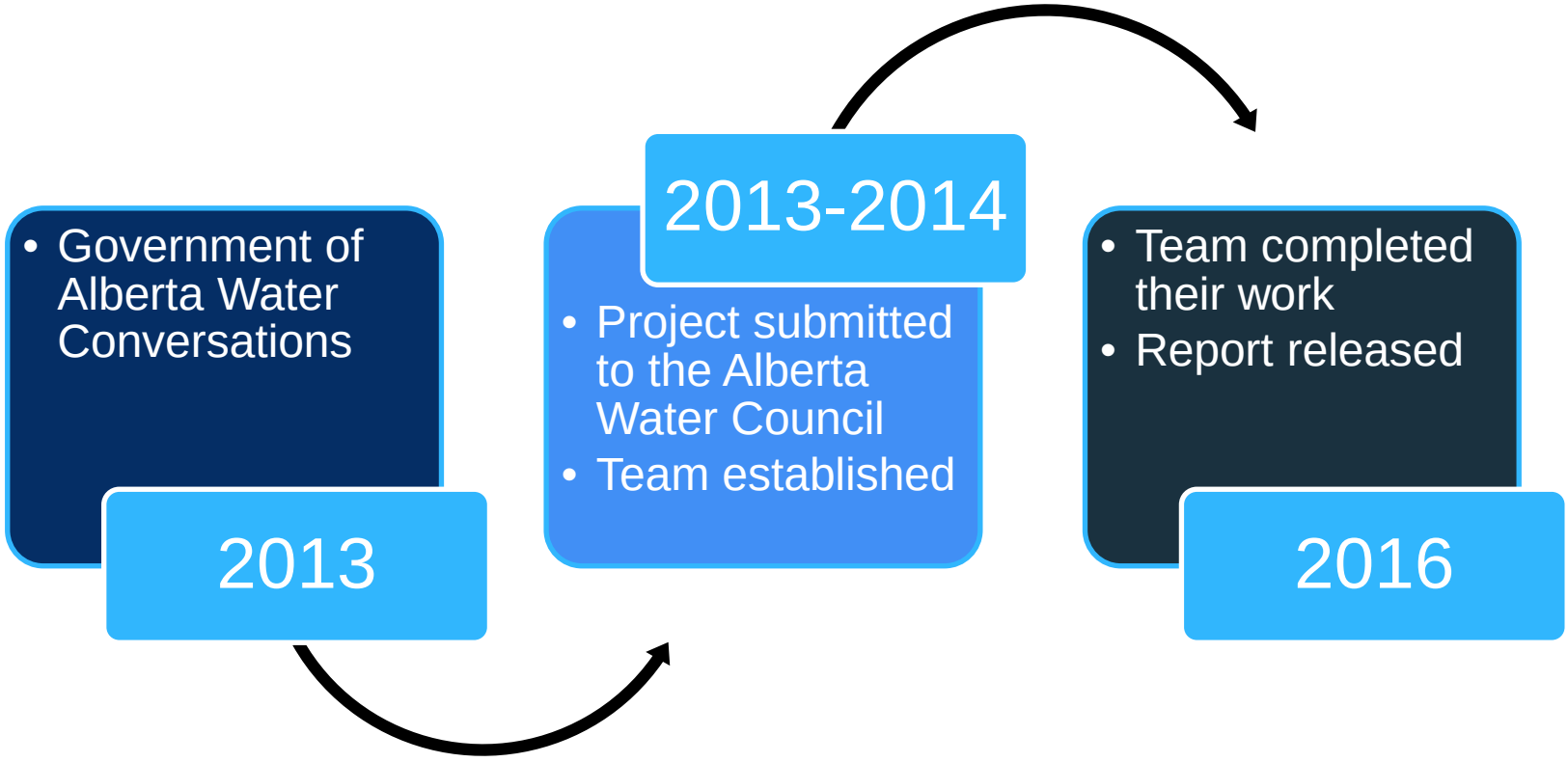
Overview

- Alberta Water Council and the project
- Methodology and findings
- 5 ways for improving water literacy in Alberta
- Next steps
- Questions

Alberta Water Council

- *Water for Life* partnership
- Multi-stakeholder group of 24 members (governments, NGOs, industry)
- Consensus decision making process
- Policy advice on provincial water management concerns

Water Literacy Project



The ideas keep pouring!

Alberta Water Council
Water Literacy Project Team 2016

Water Literacy

Environmental literacy is the capacity to perceive and interpret the relative health of environmental systems and to take appropriate action to maintain, restore or improve the health of those systems. Water literacy is a narrower focus of environmental literacy. Being “water literate” means having an understanding of the significance of water in life, and understanding where water comes from and how to use it sustainably. Alberta Environment and Parks is committed to developing a water literacy strategy that will include actions to promote environmental stewardship among Albertans.

ALBERTA WATER COUNCIL

Water Literacy Ladder

Ladder Level	Desired Outcome
Actions	Albertans are active stewards of water and watersheds.
Skills	Albertans have the skills and resources required to apply their knowledge and participate in the creation of water policies, plans and stewardship activities.
Attitudes	Albertans adopt attitudes of appreciation and concern for water and healthy watersheds.
Knowledge	Albertans understand watershed function and provincial water management functions.
Awareness	Albertans are aware of the significance of water within social, economic and ecological systems.

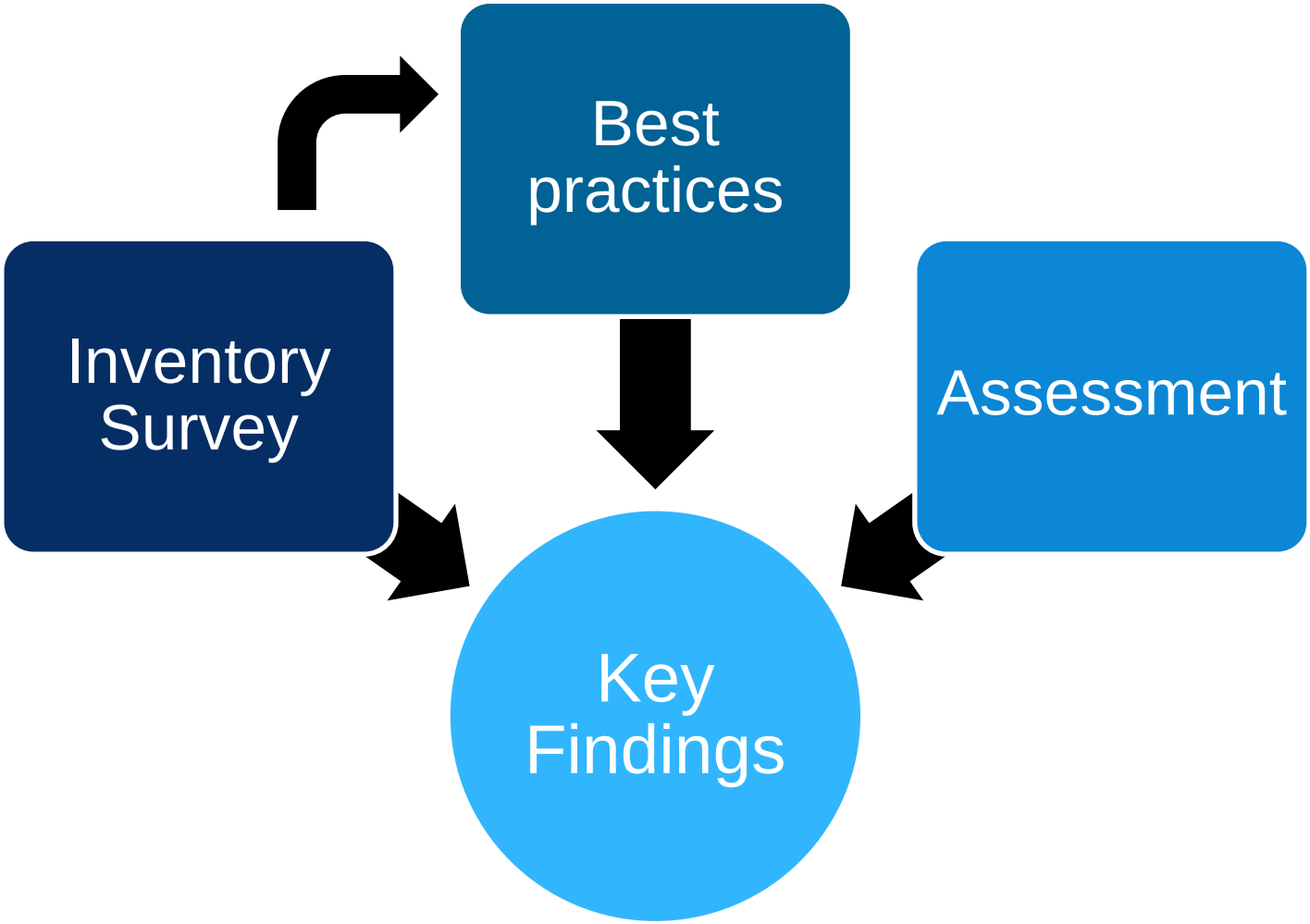
ALBERTA WATER COUNCIL

Water Literacy Practitioner

Water literacy practitioner is a working definition adopted in this report to refer to a group or an individual involved in planning, directing and delivering information about water to an audience. Water literacy practitioners are people who work in the formal education system (from K-12, colleges and universities) and also include federal, Indigenous, provincial and municipal governments; policy makers; regulators; not-for-profit organizations; industry and other communicators. Depending on the practitioners and their mandate, initiatives vary by topic, audience and delivery area. Throughout this report, sidebars feature examples of water literacy practitioners and their work.

ALBERTA WATER COUNCIL

Methodology



Key Findings: Inventory Survey

Inventory Survey

122
participants

65
organizations

152
programs

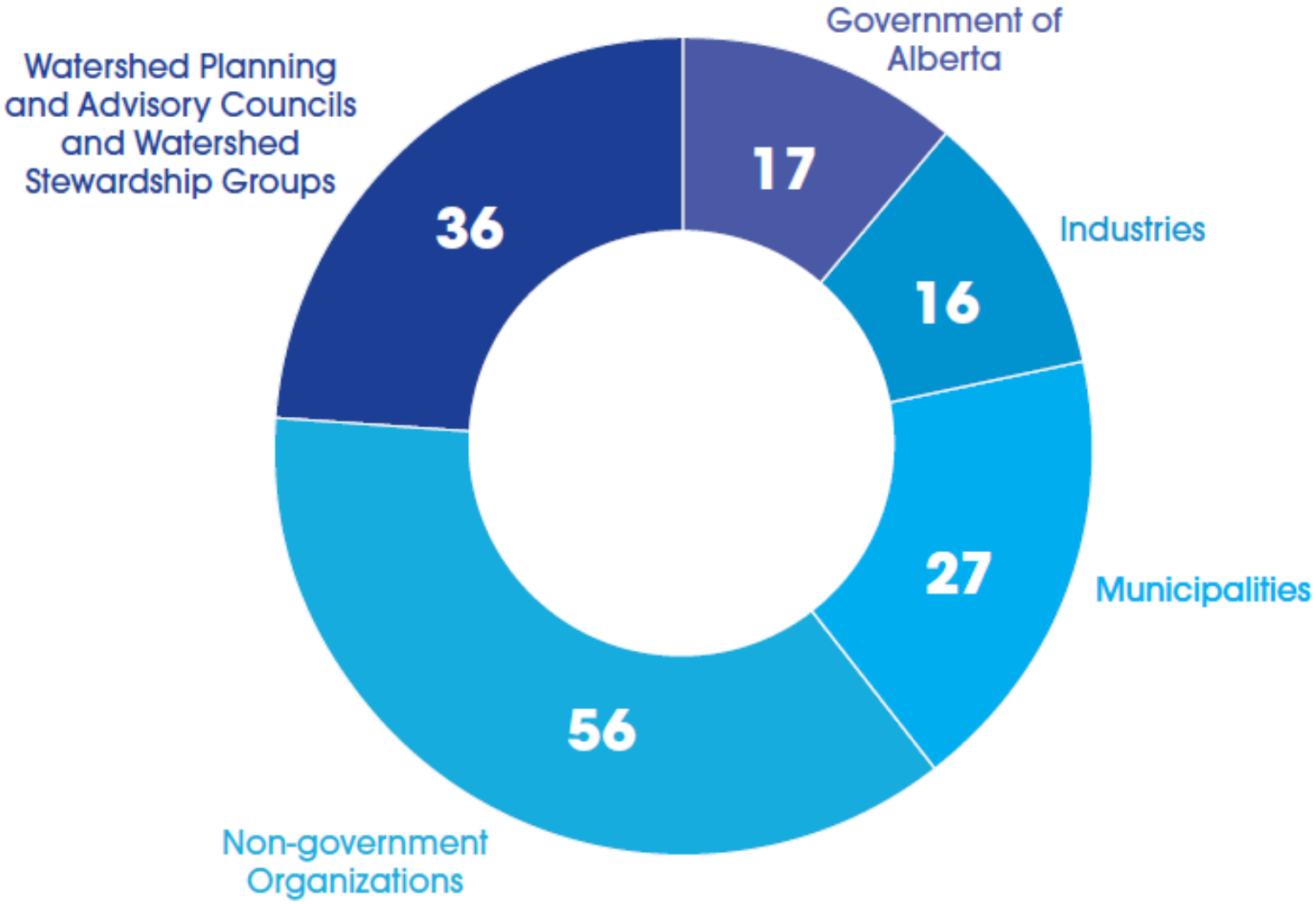
Program Intent

Educate or raise awareness

Provide tools

Facilitate informed discussions and decision making

Type of Organizations

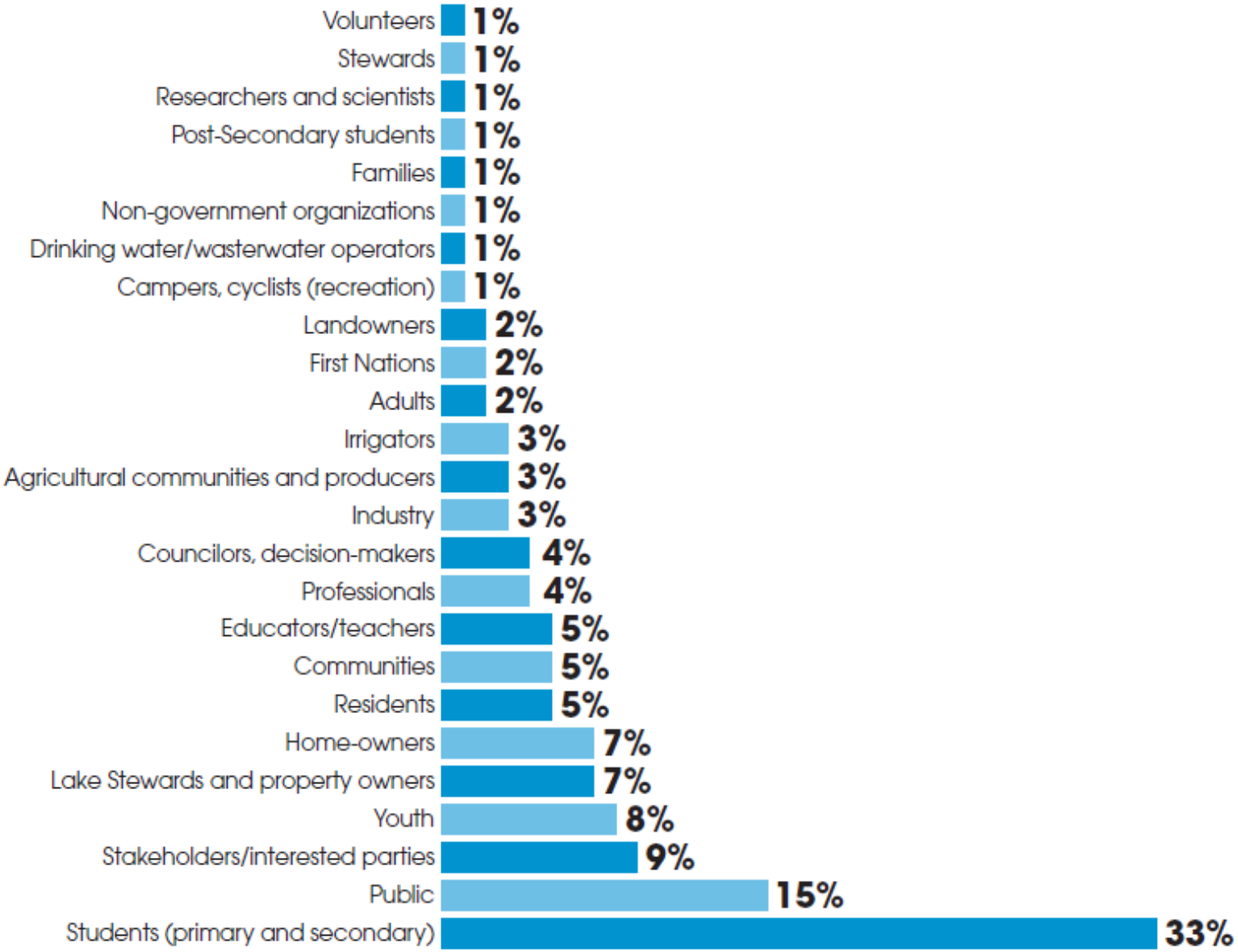


Topics

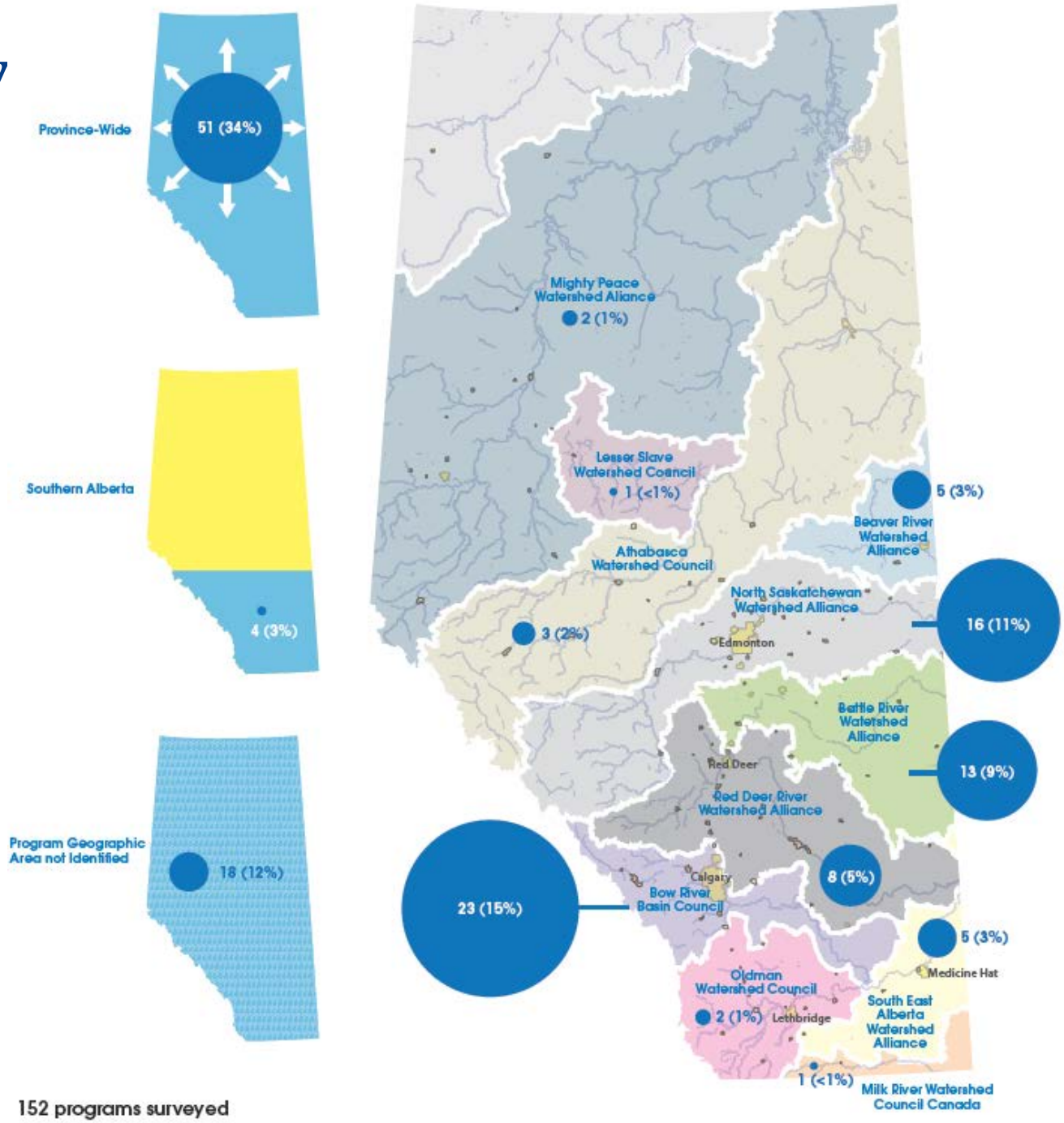
Most Popular	• Watersheds • Water Conservation and efficiency • Water cycle
Least Popular	• Flood management • Groundwater • Surface water
Missing	• Water allocation • Climate variability and adaptability • Drinking water and wastewater systems

ALBERTA WATER COUNCIL

Audiences


Volunteers 1%
Stewards 1%
Researchers and scientists 1%
Post-Secondary students 1%
Families 1%
Non-government organizations 1%
Drinking water/wasterwater operators 1%
Campers, cyclists (recreation) 1%
Landowners 2%
First Nations 2%
Adults 2%
Irrigators 3%
Agricultural communities and producers 3%
Industry 3%
Councilors, decision-makers 4%
Professionals 4%
Educators/teachers 5%
Communities 5%
Residents 5%
Home-owners 7%
Lake Stewards and property owners 7%
Youth 8%
Stakeholders/interested parties 9%
Public 15%
Students (primary and secondary) 33%

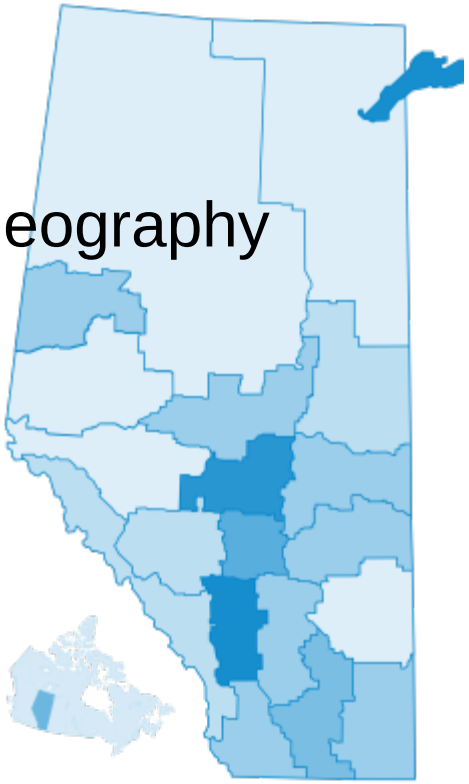
Delivery Areas



152 programs surveyed

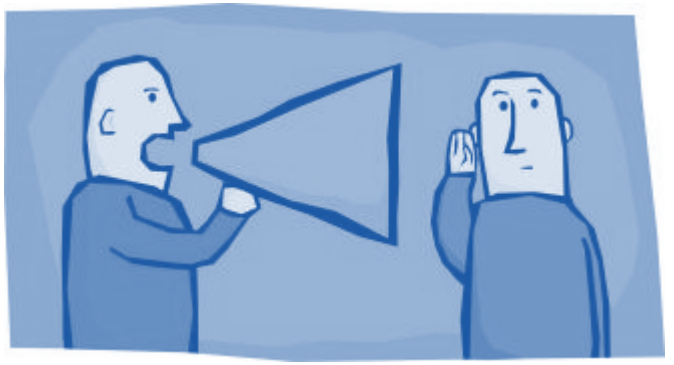
Challenges

Geography



Funding

Promoting programs



Main Gaps

Overall: connections between policy makers and practitioners

Drinking water and Wastewater

No public programs on threats to drinking water or how wastewater is treated. Some municipal programs on these topics are mainly delivered in larger urban areas.

Healthy Aquatic Ecosystems

Many NGOs programs but only delivered in larger urban areas. Few programs that link water and aquatic health issues.

Hydraulic Fracturing

Few non-industry programs exist to disseminate information on this topic. Most targeted by industry in fracking areas.

ALBERTA WATER COUNCIL

Key Findings: Northern Alberta

Organizations

- Athabasca Watershed Council
- Lesser Slave Watershed Council
- Mighty Peace Watershed Alliance
- ConocoPhillips
- Province-wide (e.g., the Government of Alberta, Alberta Council for Environmental Education, First Nations Alberta Technical Services Advisory Group)

Programs and Audiences

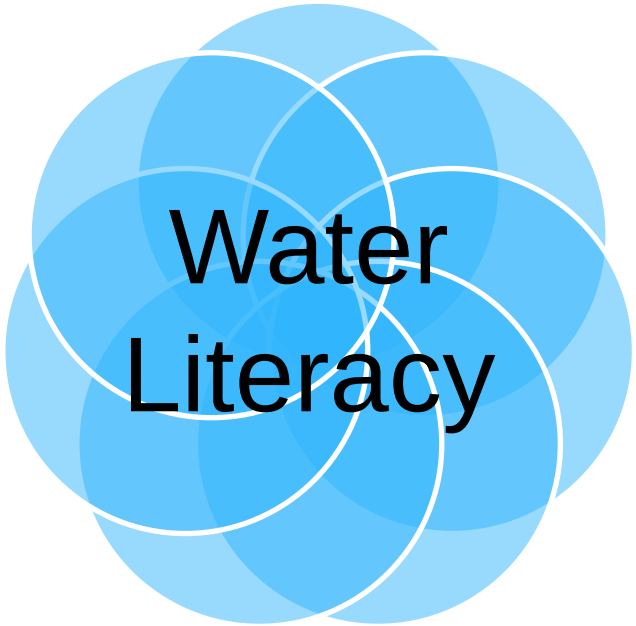
- conservation and efficiency -mayors, municipal administrators
- farm water use -ag producers
- lake health monitoring -lake users
- water well maintenance -landowners
- wetlands -students
- watershed -public
- water use -industry
- water treatment -First Nation technicians
- water quality -researchers and policy-makers

Tools

social media

policies

mentorship



webinar

information booths

website

presentations

Key Findings: Best Practices

What is a Best Practice?

- method or process that represented a successful and/or effective way of achieving a desired program objective
- several best practices used by practitioners were documented
- organized into program success and program effectiveness

Successful versus Effective Programs

Successful

- accomplishes desired objectives while making use of time and resources but may not result in environmental or behavioural changes

Effective

- accomplishes desired objectives while making use of time and resources and results in environmental or behavioural changes

Key Findings: Assessment

Topics and Process

6

- lakes
- wetlands
- watershed
- water
- sector water use
- drinking water, wastewater and groundwater

Focus groups and phone interviews

Pre-test: 20 Albertans

Actual: 100 Albertans

Northern Alberta

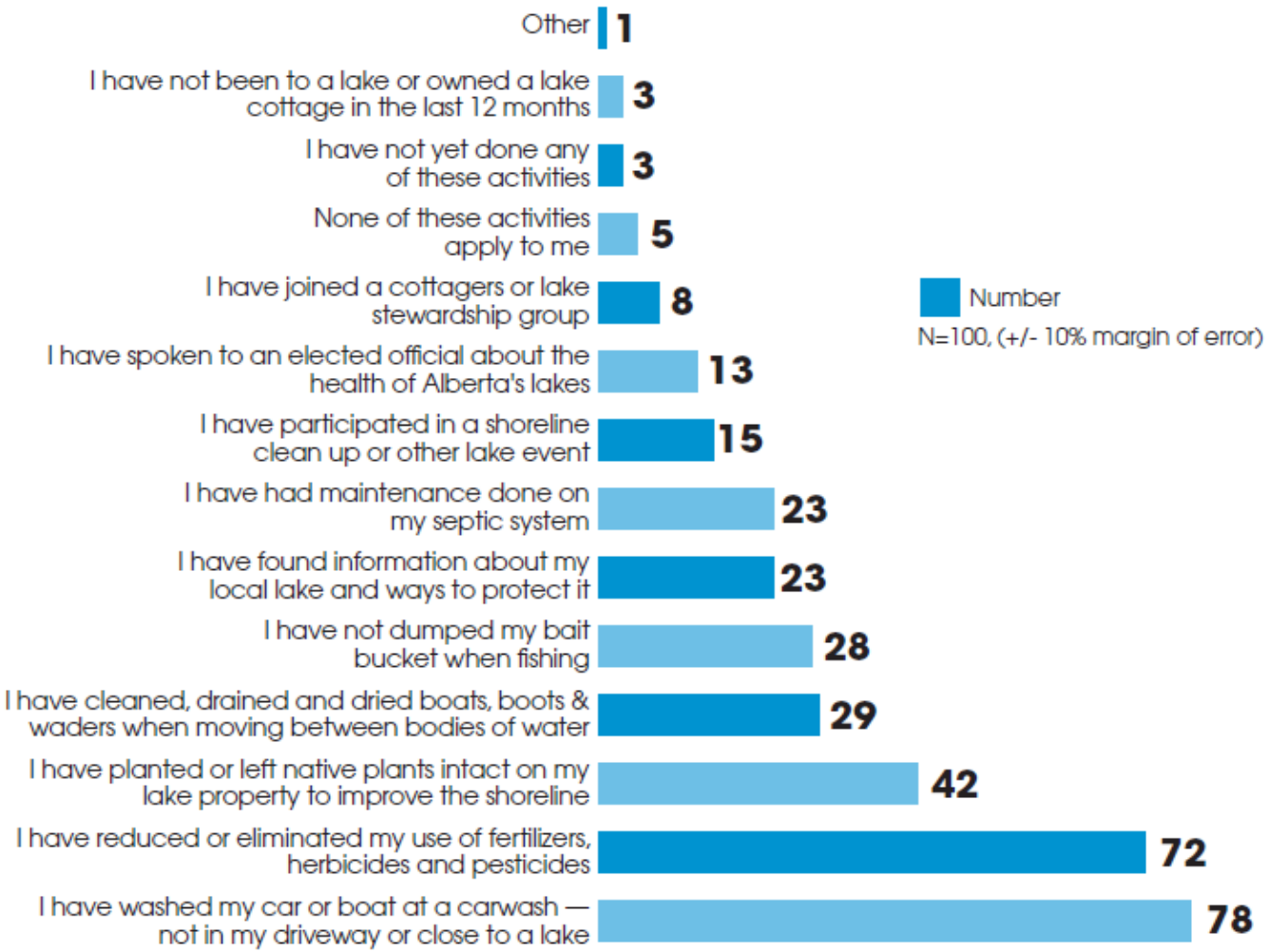
n= 20+100

Places included:

- Fort McMurray (1)
- Grand Prairie (2)
- Hythe (1)
- Mayerthorpe (1)
- Peace River (1)
- Plamondon (1)

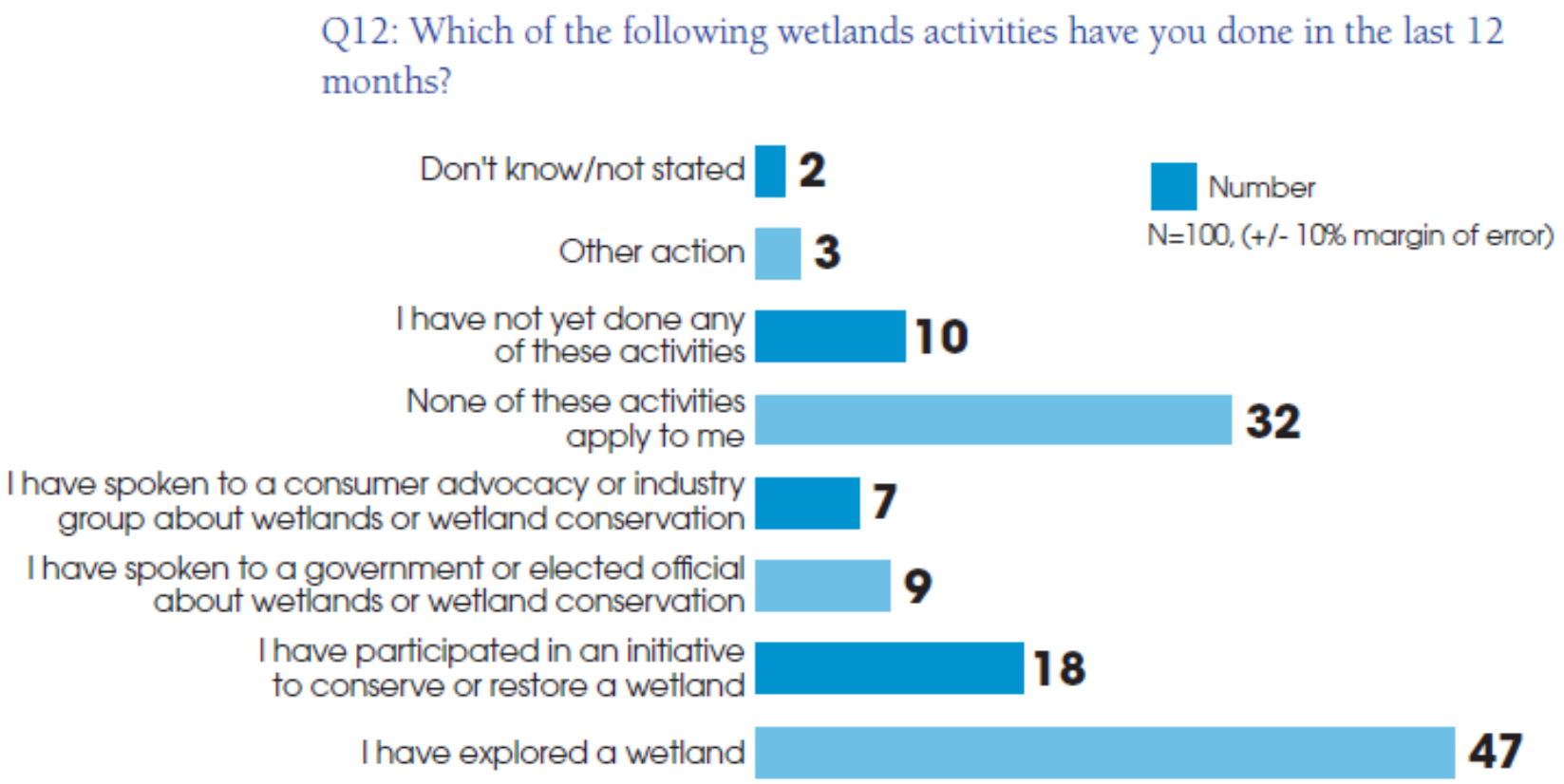
Lake Management

Q6: Whether or not you own lakeshore property, which of the following activities to improve lake health have you done in the last 12 months? (Choose all that apply)

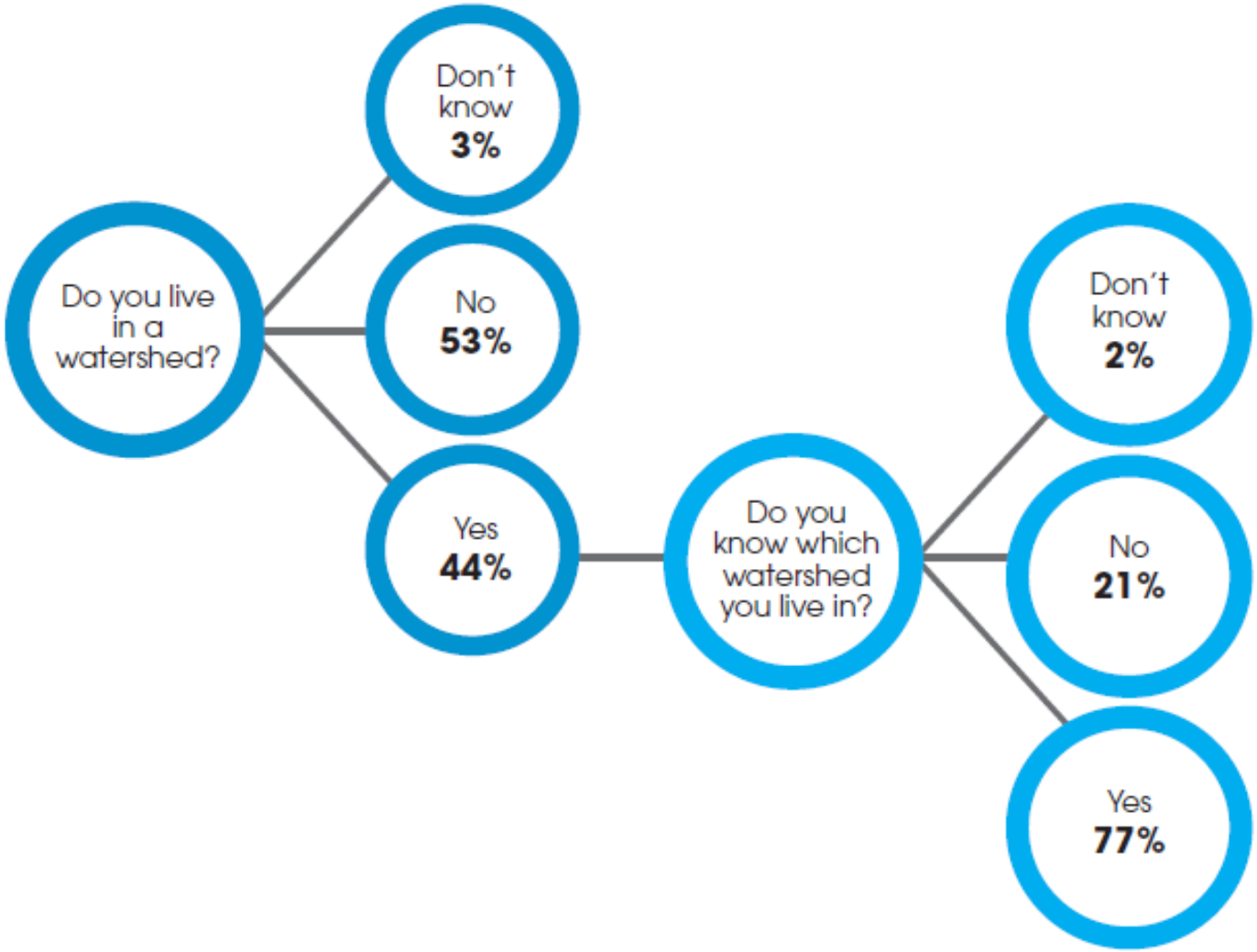


ALBERTA WATER COUNCIL

Wetland Management

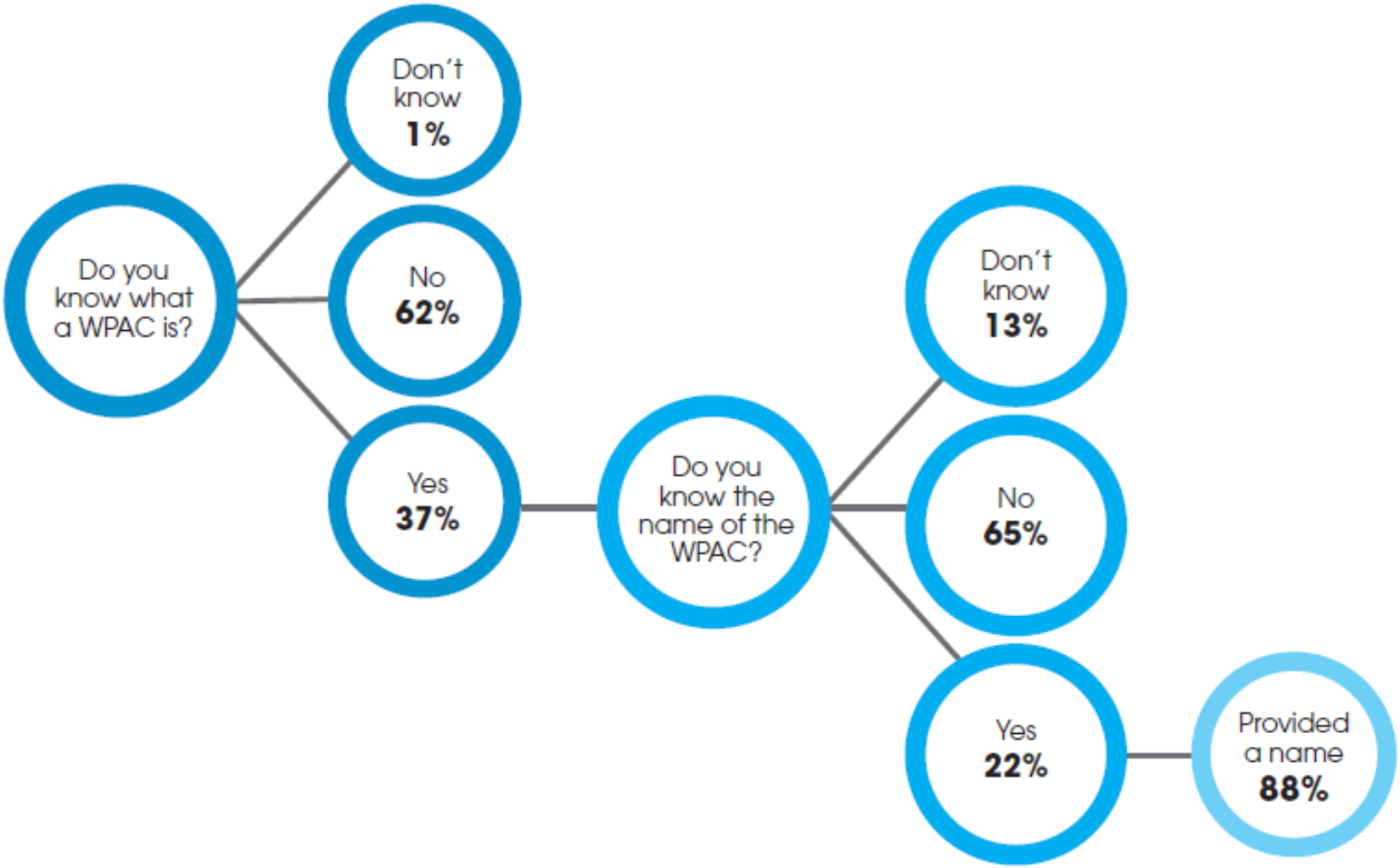


Watershed Management



Watershed Knowledge—Do you live in a Watershed?

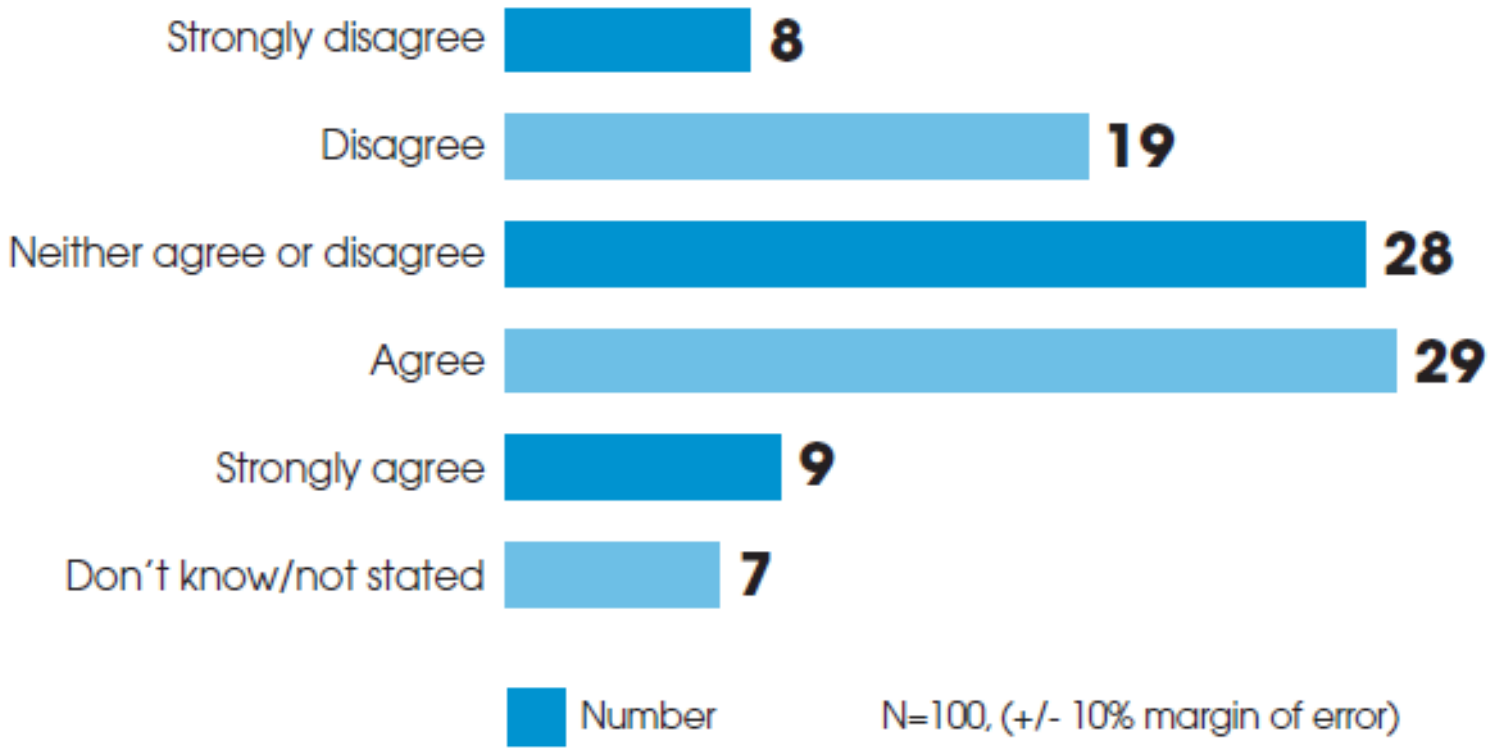
Watershed Management



Knowledge about WPACs—Do you know what a WPAC is?

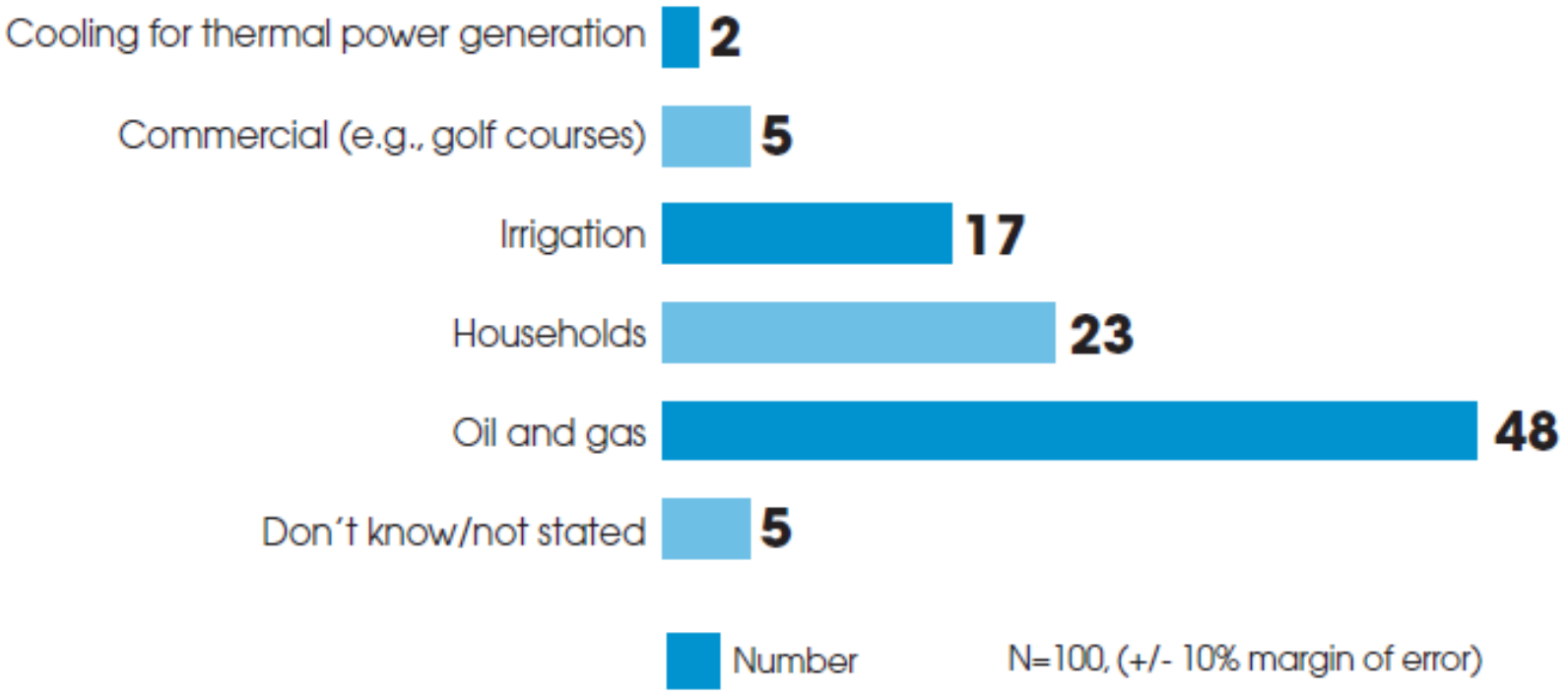
Water Management

Q22: I believe the GoA manages and allocates our available water supply effectively and fairly to meet a variety of social, economic and ecological needs.



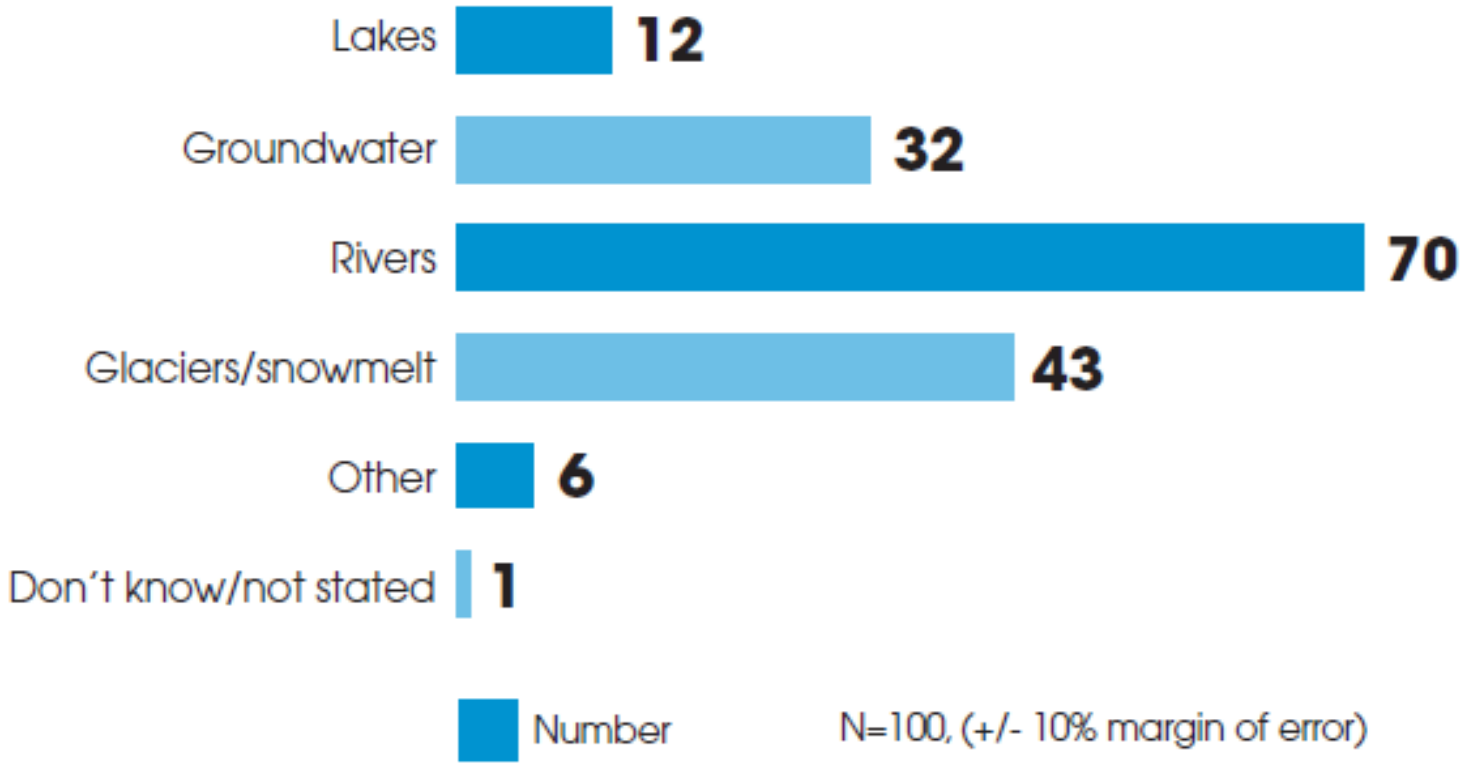
Sector Water Use

Q26: Many sectors require water in different amounts for different purposes. Who or what sector do you believe uses the most water in Alberta?



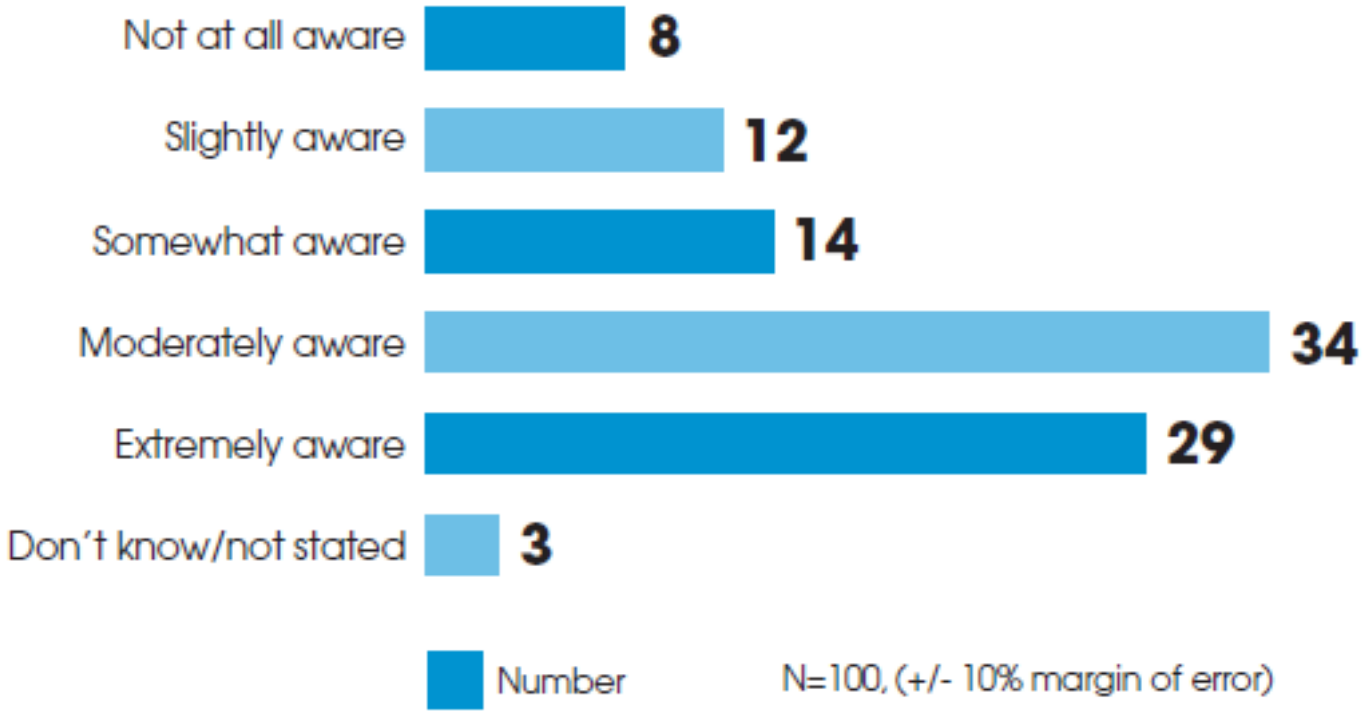
Drinking Water

Q28: From which of the following sources does your drinking water come? (choose all that apply)



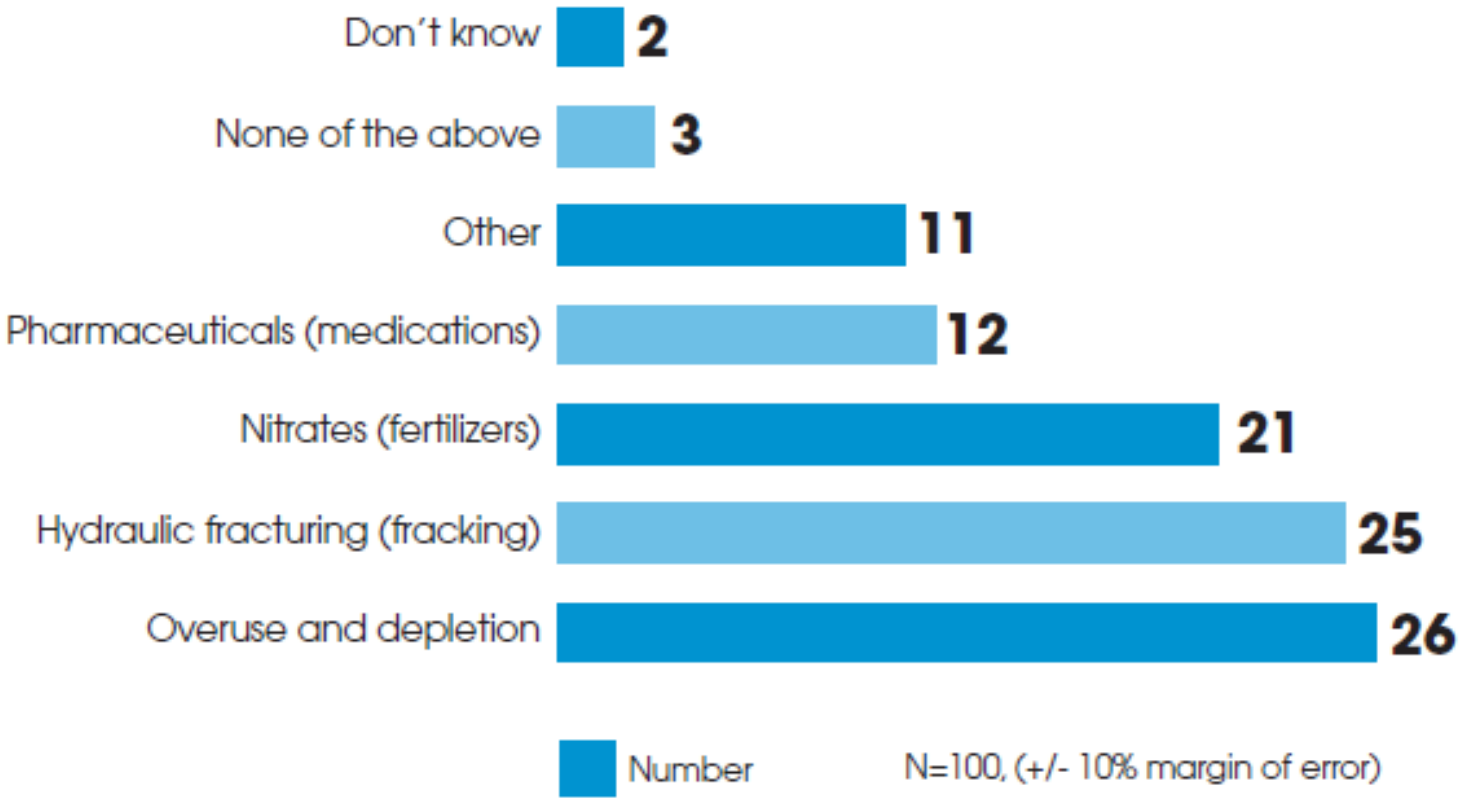
Wastewater

Q29: I am aware of where/how my wastewater and stormwater are returned to surface water sources (such as a river)?



Groundwater

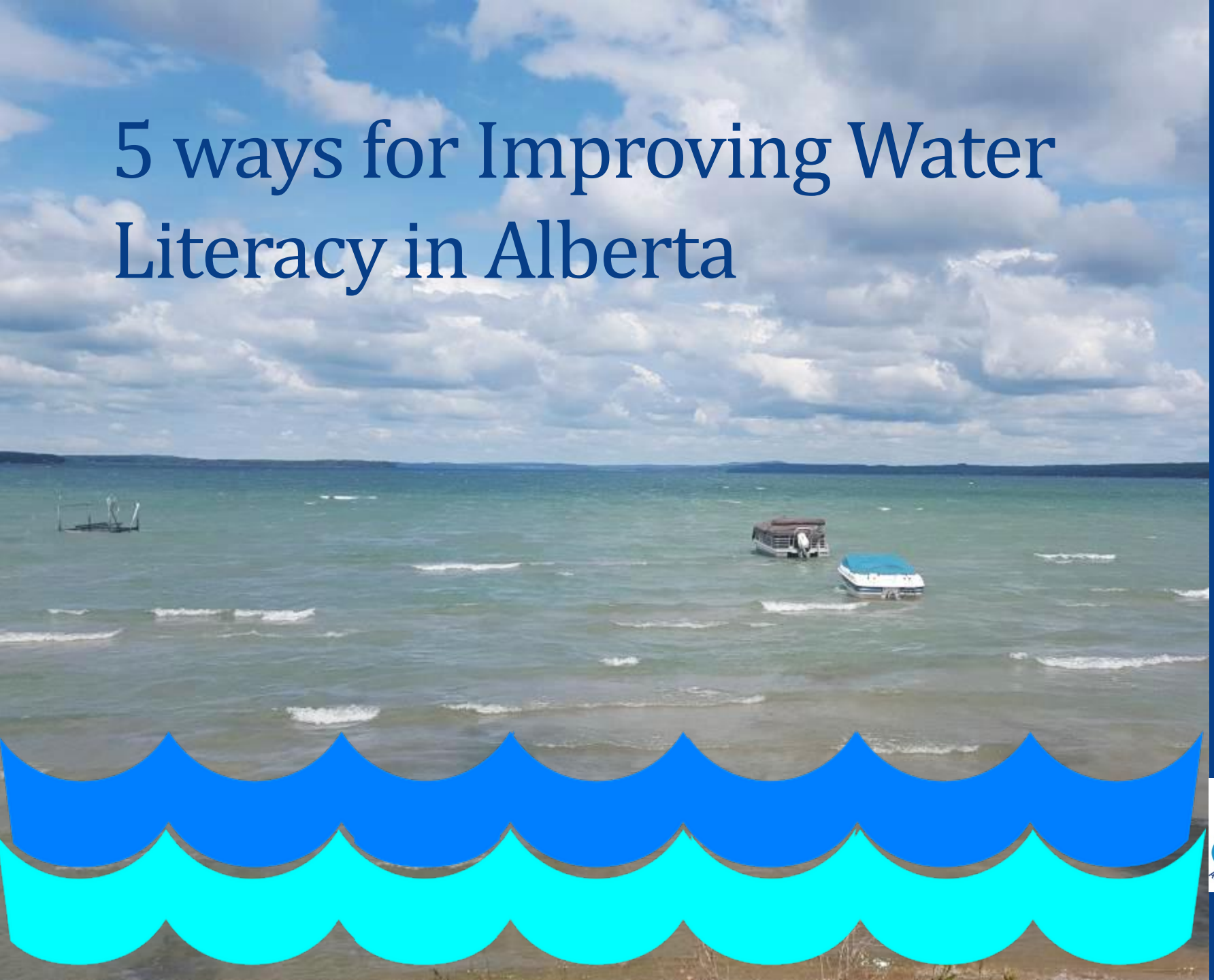
Q36: I believe the biggest contamination threat to Alberta's groundwater is (choose one):



General Results

- higher levels of awareness and knowledge in some topics than others (e.g., lake management and sector water use)
- attitudes on some topics over than others (e.g., wetlands and water management)
- Albertans may have the skills to bring about change but these were not being translated into direct actions

5 ways for Improving Water Literacy in Alberta



Increase Collaboration among Water Literacy Practitioners

- diversity of programs offered in Alberta
- no formal process to facilitate collaboration among practitioners and avoid duplication of efforts
- Value in enhancing existing portals or creating a new one

Provide Tools and Knowledge to Assess Program Success and Effectiveness

- some practitioners did not measure the success and/or effectiveness of programs—did not know how, or lacked resources
- assessed Albertans demonstrated higher levels of awareness and knowledge and lower levels of skills and actions
- train the trainer workshops and guidebook and toolbox

Better Align Topics, Audiences, Delivery Areas and Methods

- many topics, audiences and delivery areas, but gaps in the concerns addressed, where and to whom
- low level of awareness and knowledge among Albertans on basic water topics and the role of Indigenous communities in its management
- water 101 campaign—books, information kits, posters, social media

Strengthen Capacity among Water Literacy Practitioner

- funding was a common challenge for NGOs—limits program design, delivery and evaluation
- new types of funding needed
- grants, in-kind support or other types of incentives

Assess Water Literacy among Albertans

- many practitioners do not know if the awareness, knowledge, skills, attitudes or actions of their program participants have changed with time
- create a baseline of information and assess at periodic intervals
- obtain information about what Albertans know about water and what they need to learn more about

What is happening now?

- Interim Water Literacy Strategy

- Water Literacy Survey Alberta

https://extranet.gov.ab.ca/opinio6/s?s=29820

Contact and Resources

- **Anuja Ramgoolam**

Project Manager, Alberta Water Council

a.ramgoolam@awchome.ca or 780-644-7375

Website:
http://awchome.ca/Projects/WaterLiteracy/tabid/199/Default.aspx

- **Janine Higgins**

Community Engagement Lead, Alberta Environment and Parks

janine.higgins@gov.ab.ca or 587-986-6694

Website: https://extranet.gov.ab.ca/opinio6/s?s=29820

Thank you for listening!

Questions?