Water Availability Engagement

Alberta Environment and Protected Areas

Agenda

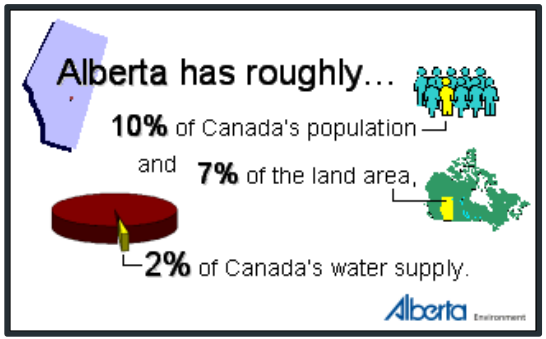
- Welcome
- Water management in Alberta
- Topic Presentations:
  - Water allocation and transfers
  - Conservation, efficiency, and productivity
  - Alternative water sources and water reuse
- Q&A Discussion

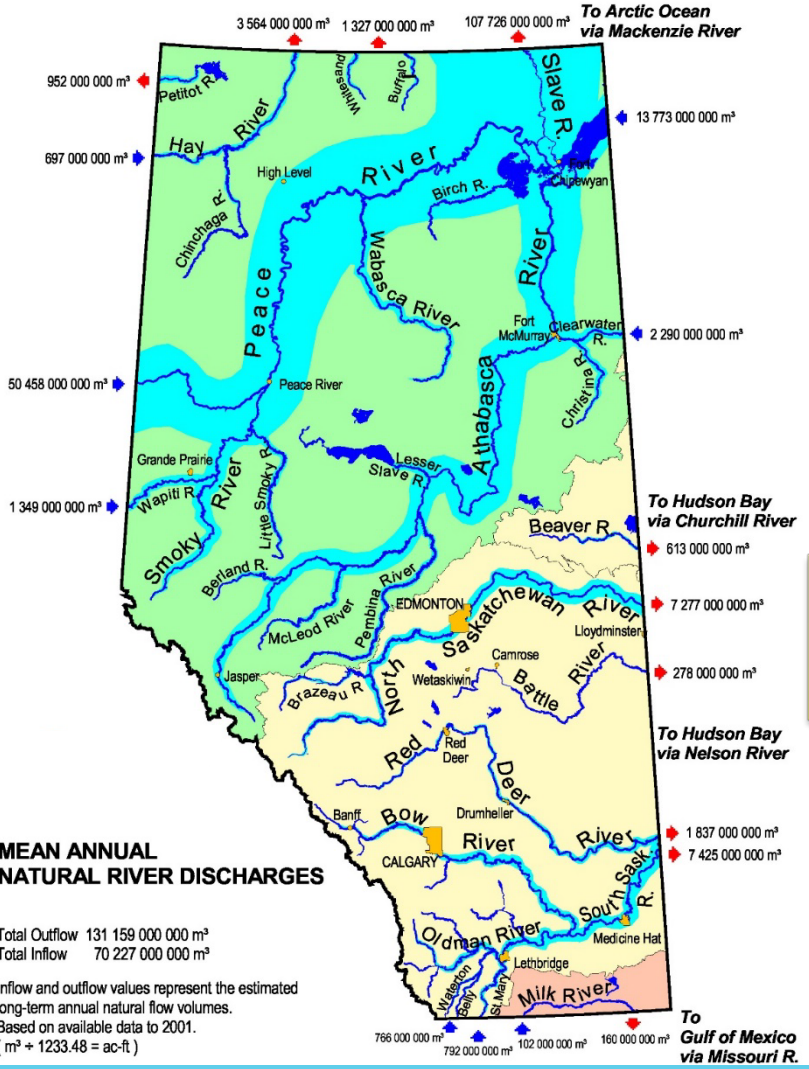
Water Availability Engagement

- Water management in Alberta
- Intent of engagement
- Opportunities and barriers to-date
- How to get involved

Water management in Alberta

Water in Alberta, and where it flows





to Arctic Ocean (86.6%)

to Hudson Bay (13.3%)

to Gulf of Mexico (0.1%)

Alberta's Water Management System

Provincial laws and policies that collectively foster wise and efficient use of water, while stewarding and protecting aquatic ecosystems and the province's water needs, now and in the future

- The *Water Act* (1999) is the main legislation to manage water and impacts to water resources.
  - Applies to all surface water and groundwater.
  - Impacts to water and water bodies are managed and authorized by licences, approvals and other tools, including exemptions.
- Monitoring and forecasting data and observations to understand what is happening in the system and the environment.
- Physical infrastructure to improve availability and reduce water variability risk – e.g., dams and reservoirs.

Alberta's approach

Provincial

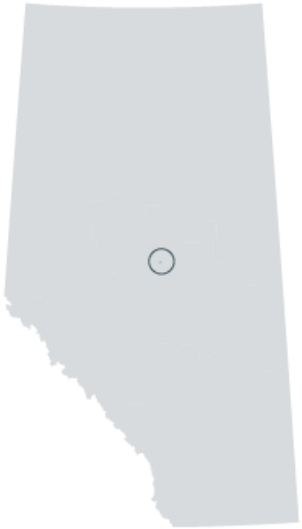
- Alberta Water for Life Strategy
- *Water Act*
- Land Use Framework

Regional

- Surface Water Management Framework
- Inter-Provincial Apportioning Agreements

Sub-Regional

- Sub-Regional Water Management Plans
- Watershed/Lake Management Plans



Local

- Regulation of projects through the *Water Act, Environmental Protection and Enhancement Act* and other policies

Water Act

- Provides for the allocation and use of Alberta's water resources and the protection of rivers, streams, lakes and wetlands.
- Under Alberta's *Water Act*:
  - any alteration to water flow requires an approval that assesses impacts prior to beginning the activity;
  - a water licence only provides the licensee the right to use water if it is there, it does not guarantee you the water;
  - older licence numbers are given priority over newer licences in the event of a water shortage; and,
  - household use of water is a statutory right. It is the highest right to use water and does not require any licensing or registration.

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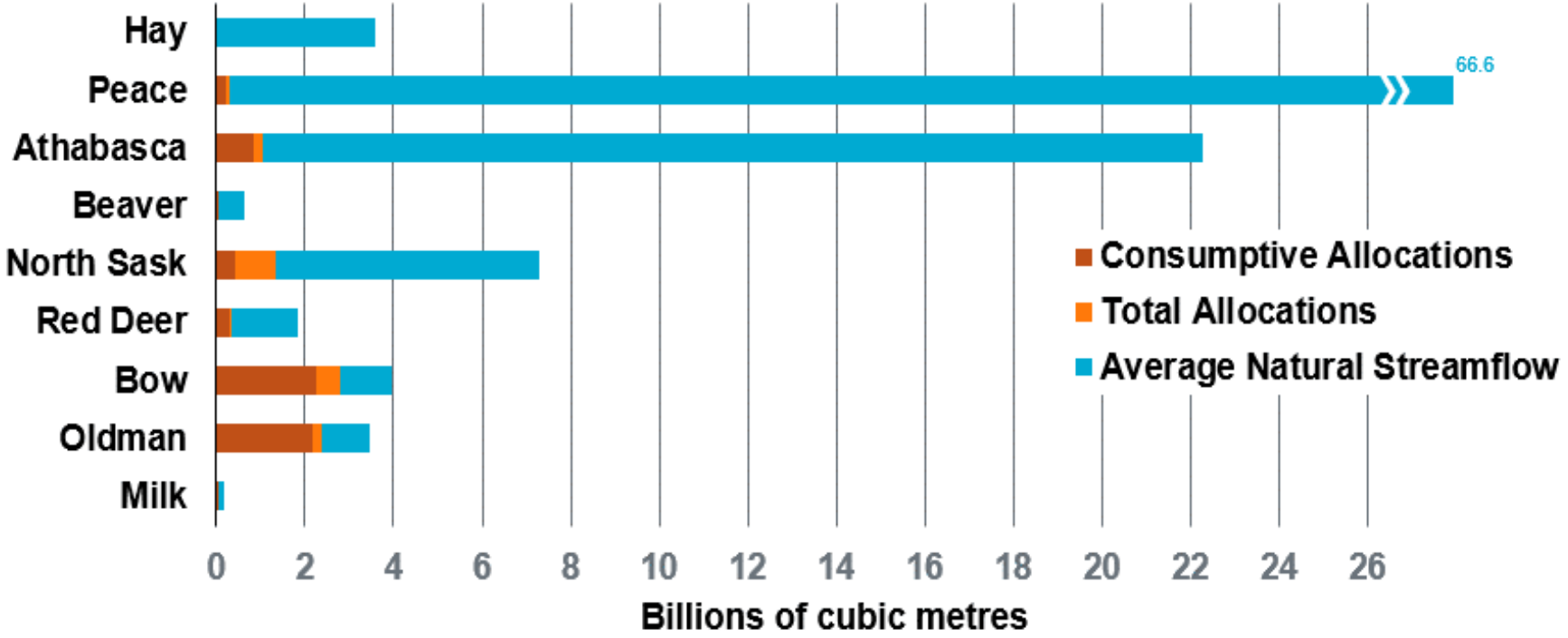
2023 Surface Water Allocations by River Basin Compared to Average Natural Streamflow Volumes



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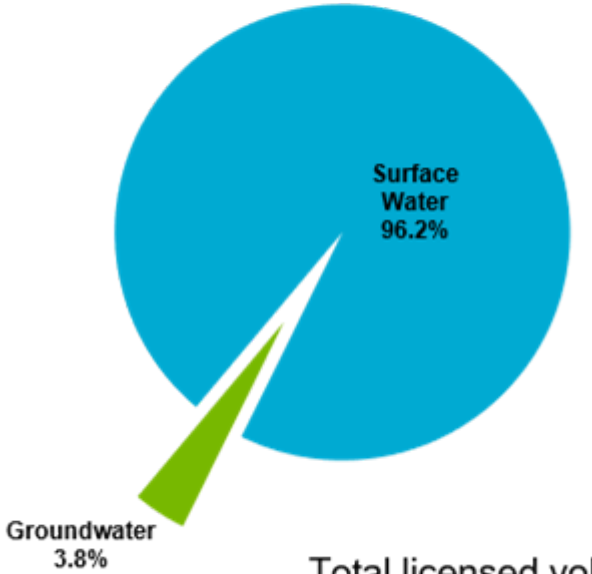
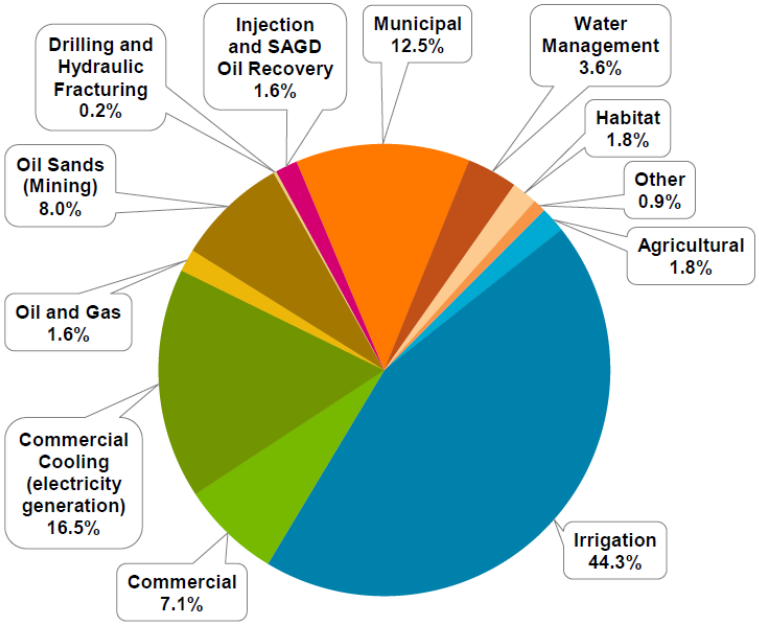
2023 Total Water Allocations by Source



Total licensed volumes:
9.73 billion cubic metres

2023 Allocations by Purpose



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Water Management Plans

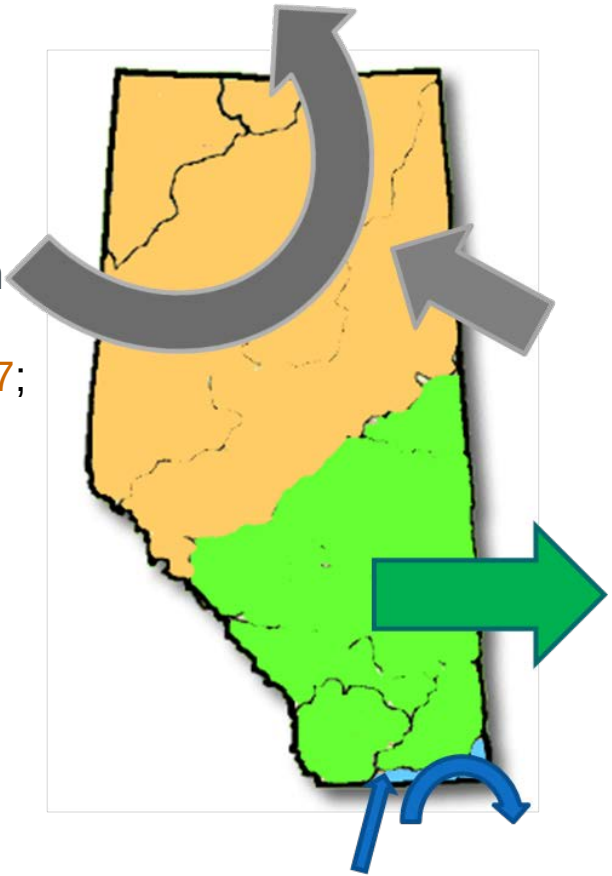
- Statutory plans developed under the *Water Act.*
- Provide guidance for regulatory decisions made under the *Water Act*, including:
  - establishment of minimum in-stream flows,
  - conditions on diversions, and
  - strategies for the protection of the aquatic environment.
- Must be considered when making water approval decisions.

Water Management Infrastructure

- Province is the largest single dam owner in Alberta
  - Over 200 major infrastructure projects, valued at over $9.0 billion
- Managed to provide water supplies and manage floods

Transboundary Waters

- Cooperative Agreements
  - Waters flowing from BC and Sask. into northern Alberta into NWT - Mackenzie River Basin Transboundary Waters Master Agreement, 1997; and AB-NWT Bilateral Water Management Agreement, 2015
  - Eastward flowing waters from Alberta to Saskatchewan - Master Agreement on Apportionment, 1969
- International Treaty (Canada-US)
  - Waters flowing from Montana into Alberta (St. Mary, Milk) and back to Montana (Milk) - Boundary Waters Treaty, 1909



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Intent of engagement

Minister Mandate Letter

Review Alberta’s water management strategy to increase the availability of water and water licences to Alberta’s municipalities, businesses and agricultural producers while maintaining the highest standards of water conservation and treatment.

Your Feedback

- Want to hear any opportunities to enhance water availability and management
  - Alberta.ca webpage includes Enhancing Water Availability engagement guide
- Have identified opportunities and barriers that the department has received in the past
  - Alberta.ca webpage includes water management issues sheets for each of these topic areas

Some opportunities and barriers

- Water allocation and transfers
- Conservation, efficiency, and productivity
- Alternative water sources and water reuse

Water Allocation and Transfers

Water Allocation and Transfers

- Licences consider operational flexibility and are issued acknowledging some variability will occur – this is a fundamental need for most water users
- All or a portion of a water licence can be transferred
- Opportunity to:
  - Simplify the transfer system to encourage greater water use efficiency, and moving water between different uses; and,
  - Enhance transparency of the existing licensing and transfer system, to support water users in identifying and accessing available water.

We want to hear from you

- Are there ways to improve water licensing, and licence transfers?
  - Do you see examples of regulatory barriers? Things that can work better?
- Do you think the government should consider greater involvement in facilitating or encouraging water licence transfers?
- Should licensees have an accountability to demonstrate they are using the water they've been allocated?
  - How can other new water users become aware of potentially available water?
  - Should water licence conditions be reviewed if the context has changed since it was issued?

Exemptions from Water Authorizations

- Activities that impact water bodies or water flow require authorization
  - Most often as an approval or licence, unless specifically exempted
- Exemptions are one tool to reduce regulatory burden
  - no data or information is collected for exemptions; impacts to other water users or to the environment can be difficult to measure
- Opportunity to increase thresholds for:
  - some existing exemptions, such as dugouts, stormwater use and wetland replacement projects
  - potential new limited exemptions (e.g., borrow pits, bridge washing, dust control, emergency preparedness)

We want to hear from you

- What feedback or suggestions do you have on changes to water authorization exemptions?
  - Consider their scope, conditions, or allowable quantities, for example
- Are there any minor or low-impact water uses or activities that you think could benefit from an exemption or a streamlined regulatory approach?
- What potential risks or concerns would you have when deciding whether to exempt certain water uses or activities?

Inter-basin Transfers

- An inter-basin transfer is a water licence that allows water from one major river basin to be used in another
- The *Water Act* requires a special Act of the Legislature for all inter-basin water transfers
- Opportunity to identify criteria or thresholds for inter-basin transfers that can be considered low risk to the environment and other users, where a special Act would not have to be passed by the Legislature to issue the licence

We want to hear from you

- Under what circumstances might inter-basin transfers be appropriate?
  - When are they not appropriate or necessary?
- Should we continue the existing approach for all inter-basin transfers? What criteria would be important in deciding whether an inter-basin transfer is significant or that it would pose a low risk?
  - Are there potential impacts or concerns if the special Act requirement was considered unnecessary for some inter-basin transfers?
  - Could decisions on certain inter-basin transfers be made by the Cabinet or by others instead?

Conservation, Efficiency, and Productivity

Conservation, Efficiency and Productivity

Conservation is any beneficial reduction in water use, loss, or waste.	Efficiency is completing an activity with the least amount of water.	Productivity is the amount of water required to produce a unit of any good, service, or societal value.

- Demand management through water conservation, efficiency and productivity is a strategy to manage water variability
- Alberta has made significant progress in water conservation, efficiency and productivity
- Opportunity to investigate further measures, including voluntary, mandatory, and/or market-based approaches

We want to hear from you

- Are additional measures needed or effective to increase water conservation, efficiency, and productivity?
  - Individual, sector-specific actions
    - e.g., incentive or rebates for low-flow appliances, voluntary and mandatory water use efficiency targets, water metering and volumetric water pricing, water trading and transfers, etc.
- How can we effectively quantify the costs and benefits of water use within allocations, across uses and sectors, and across Alberta?
- How should the costs associated with implementing water conserving technologies be considered?

Measurement and Reporting

- A water allocation is not actual water use
  - Individual usage and needs require flexibility and vary year to year
- Water use reporting is varied and its frequency is not always timely
  - Many small water licences have no or few reporting requirements
  - Medium to large licences have basic, mandatory reporting requirements
  - Some old licences have no reporting requirements
- Measuring water use more consistently could help us understand Alberta's actual water availability, realize potential efficiencies, and measure water productivity across the economy

We want to hear from you

- How important is it that water use be accurately measured?
- How could we start?
  - prioritized or phased approach?
  - by region, by sector, or by size of licence, or other ways?
- What are possible impacts of increasing or standardizing our approach to water use measurement and reporting?
- What types of incentives, supports, or regulatory standards may be needed?
- How should government best address the challenges of data collection, availability, and usability?

Alternative Water Sources and Water Reuse

Alternative Water Sources and Water Reuse

- Water licensing system focuses on allocating natural water sources

Stormwater and treated wastewater reuse	greywater and rainwater	Industrial process-affected water and flowback fluids reuse

- **Water reuse**: using water a second time instead of returning it to the environment as return flow
  - Offsets freshwater diversions
  - Enhances local supply options and drought resiliency
  - May reduce downstream flow, impacting other licensees and the environment
- Stormwater is considered a use of water, not a reuse, and therefore requires a water licence

We want to hear from you

- How should return flow be acknowledged by the *Water Act*?
- Are there other alternative sources of water that can or should be used?
- What barriers and limitations might need to be considered to enable the reuse of water?
  - e.g., cost, health, environmental, downstream impacts, public acceptance, or others
- Would there be a need to account for regional differences?

Use of Rainwater

- Rainwater is typically higher quality than stormwater
- The *Water Act* did not clarify or define rainwater
  - There is no clear process for Albertans who wish to use rainwater
  - If large volumes of rainwater are stored and used, waterbodies may be impacted from the reduced runoff
- Opportunity
  - Define and clarify rainwater collection, storage and use
  - Identify low-risk collection that can be exempted from licensing requirements

We want to hear from you

- Should rainwater be defined under the *Water Act*?
- Aside from a small residential exemption for rainwater, should government consider other potential exemptions?
  - e.g., non-consumptive use or a simple volume threshold regardless of purpose
- In what ways could you see rainwater being used effectively?
  - e.g., gardening, flushing toilets, washing vehicles, or others

Questions?

Upcoming engagement opportunities

Online

- Two surveys - detailed and brief
  - Can complete in whole or in part
- Ideas boards
  - What ideas do you have on ways to increase water availability in the province?
  - Which water management policies, programs, or approaches are working effectively? Which need to be strengthened, and how?
  - What do you think should be the top priorities for the province when considering its review of water management policies?
  - What technologies or innovations could help improve water availability in Alberta?
- Ask a question

Supporting Resources

- Enhancing Water Availability engagement guide
  - starting place for understanding intent and scope of this engagement
- Water management issue sheets (7)
  - opportunities and barriers that the department has heard over time
- Water management background resources
  - Water Management in Alberta – system overview
  - Fact sheets on: Water Act, water priority system, licences, management thresholds


Visit
alberta.ca/water-availability-engagement
Contact
epa.water@gov.ab.ca

Thank you!