Consideration of Environmental Flow Needs in a Decision

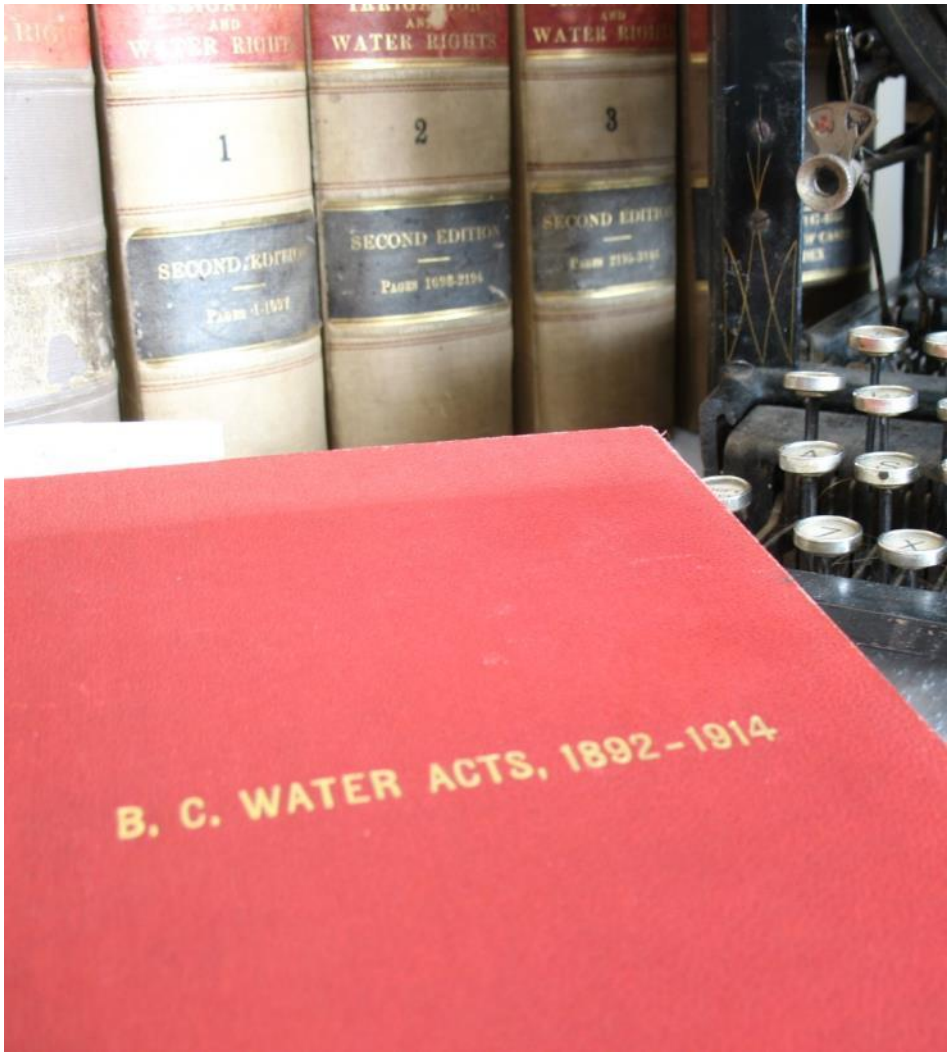
October 17, 2018

Ministry of Forests, Lands, Natural Resource Operations, and Rural Development

Objectives

- Understand how *Environmental Flow Needs* are defined under the *Water Sustainability Act*
- Understand <u>when</u> EFN must be considered water allocation decisions
- Understand <u>how</u> EFN are considered in water allocation decisions

Water Sustainability Act



- In force since February 29, 2016
- Repealed & replaced the *Water Act*
- Re-enacted water rights system
- New measures to:
  - protect stream health
  - regulate groundwater
  - manage water use during times of scarcity

New definitions under WSA

- aquatic ecosystem
- beneficial use
- **critical environmental flow threshold**
- date of first use
- **environmental flow needs**
- essential household use
- take action
- water manager
- wetland

Critical Environmental Flow Threshold defined:

"In relation to the flow of water in a stream, means the volume of water flow below which significant or irreversible harm to the aquatic ecosystem of the stream is likely to occur."

When is CEFT considered?

Sec 86 – Declarations of Significant Water Shortage

Sec 87 – Critical Environmental Flow Protection Orders

Environmental Flow Needs defined:

"In relation to a stream, means the volume and timing of water flow required for the proper functioning of the aquatic ecosystem of the stream."

When must EFN be considered?

Sec 15 (1) “Except in relation to an application exempted under the regulations, the decision maker must consider the environmental flow needs of a stream in deciding an application in relation to the stream or an aquifer the decision maker considers is reasonably likely to be hydraulically connected to the stream.”

Which applications are exempted?

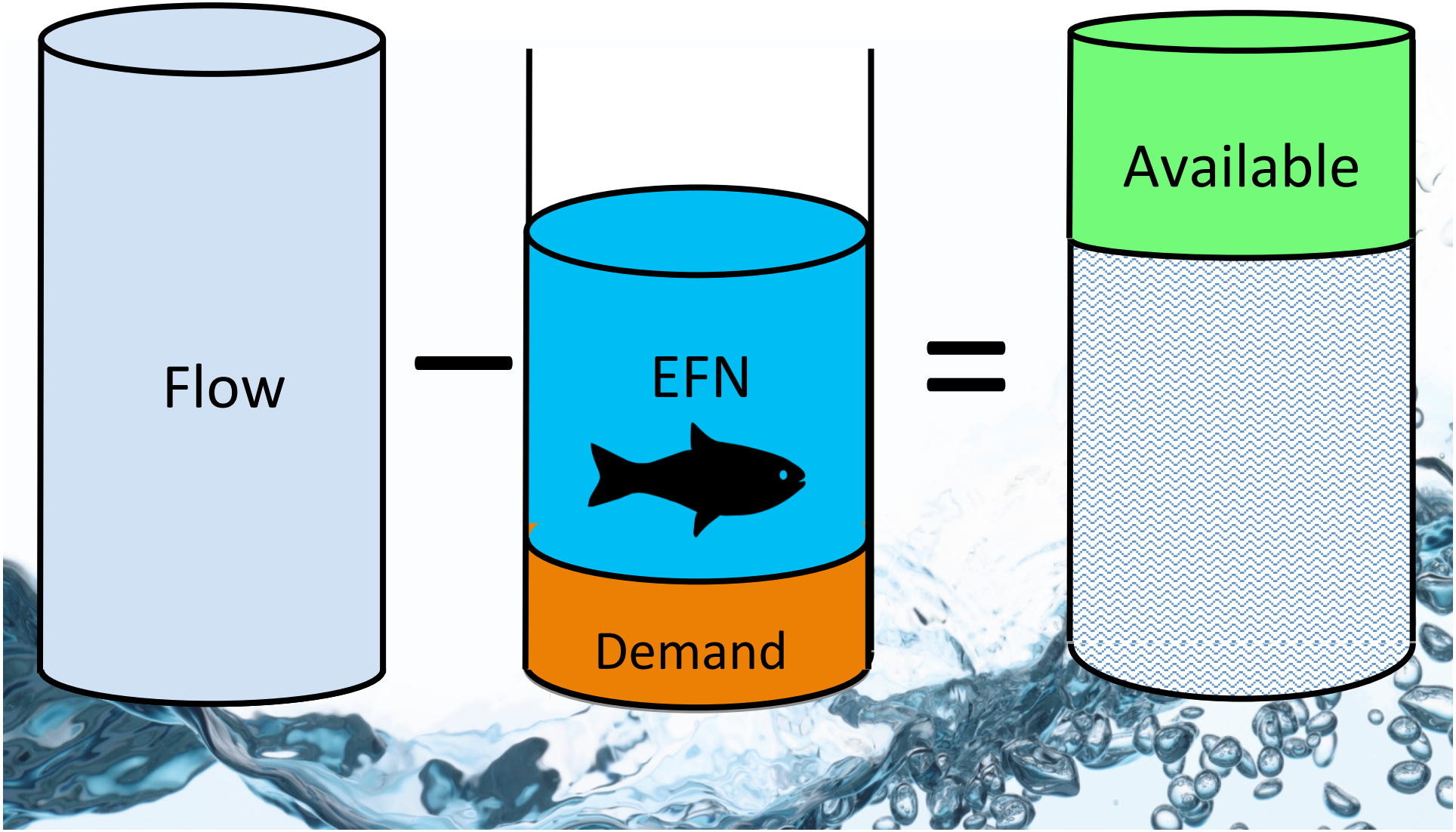
- Existing use groundwater applications
- Applications for a new authorization for domestic purpose
- Applications for amendment to existing licence
- Applications for transfer of appurtenancy
- Applications for abandonment of water licence
- Applications for a final licence

Examples of applications that require EFN consideration

- Applications for a new authorization for any purpose that is not domestic
  - Irrigation
  - Land Improvement
  - Power
  - Storage
  - Waterworks
  - Industrial
    - Commercial enterprises
    - Water bottling
    - Heat exchange
    - Etc.

EFN Visualized

Scenario #1 - Stream with available water



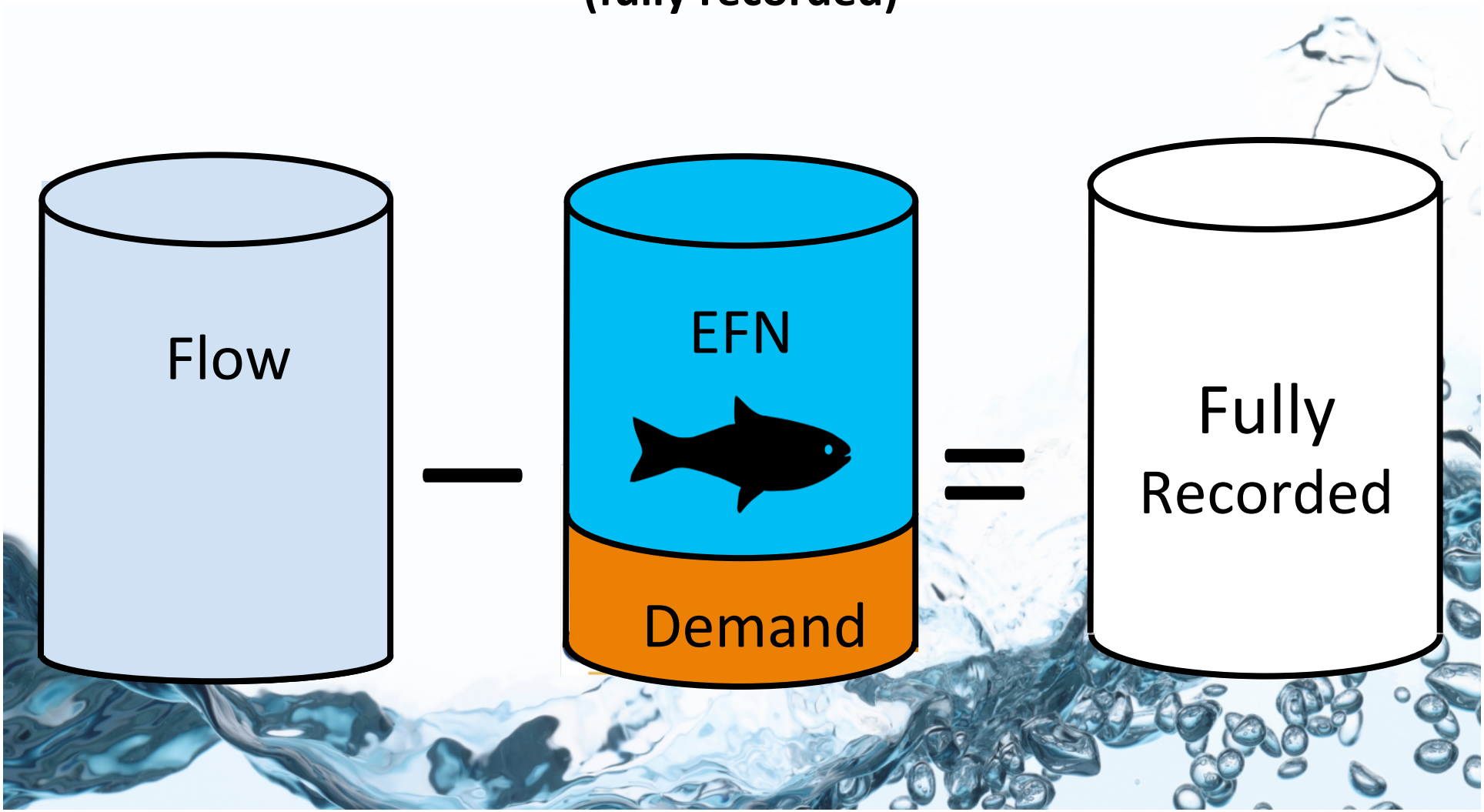
Consideration for decision

Low Risk - Streams with available water

1. Decision maker can likely issue a new water licence with few restrictions
2. Must still consider downstream users and species/habitats

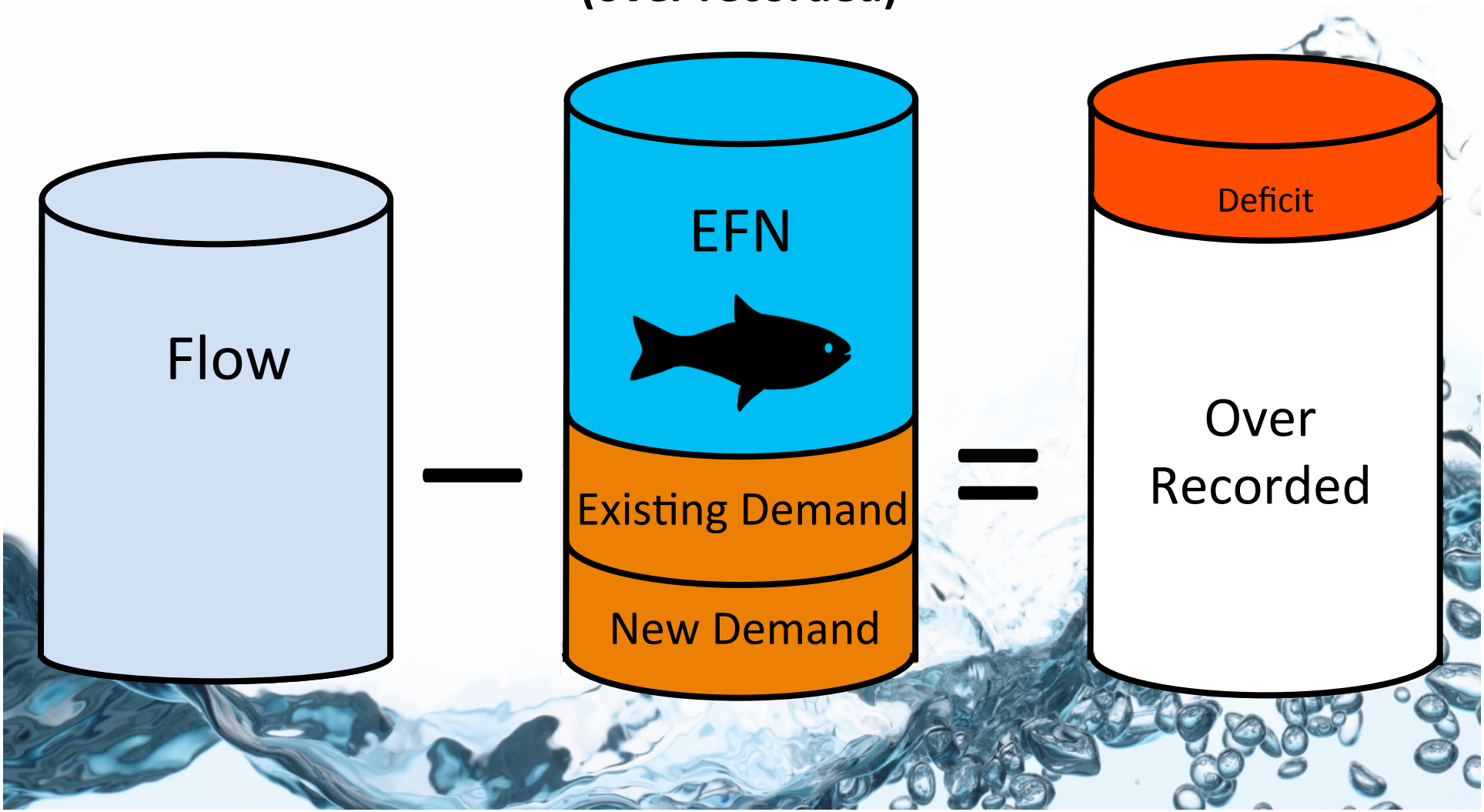
EFN Visualized

Scenario #2 Stream without available water (fully recorded)



EFN Visualized

Scenario #3 – Stream with more demand than availability (over recorded)



Consideration for decision

Medium-High Risk – Streams with limited available water

- Every water licence application must be reviewed on its merits
- The following slides contain some examples of options and considerations when making a decision on a water licence application.

Consideration for decision

Medium-High Risk – Streams with limited available water

1. Establish adequate baseline hydrological data before withdrawals
2. Prepare reconnaissance-level fish and fish habitat impact assessment
3. Issue seasonal licence, or restrictions during low flow periods
4. Development of off-stream storage

Consideration for decision

Medium-High Risk – Streams with limited available water

5. Inclusion of daily maximum or instantaneous withdrawal
6. Limit pump intake size
7. Install flow gauge
8. Monitor low flows and limit withdrawals when flows drop below a certain level

Consideration for decision

Medium-High Risk – Streams with limited available water

9. Ministry staff to conduct audit of basin use/ beneficial use review
10. Refuse application to withdraw water

Thank you!
More information:

www.gov.bc.ca/water

Apply for a water licence at:
FrontCounterBC
www.frontcounterbc.ca
FrontCounterBC@gov.bc.ca
1-877-855-3222