

Environmental Flows in Alberta

Andrew J. Paul and Lauren Makowecki

Fish and Wildlife
Environment and Sustainable Resource Development
Cochrane, Alberta
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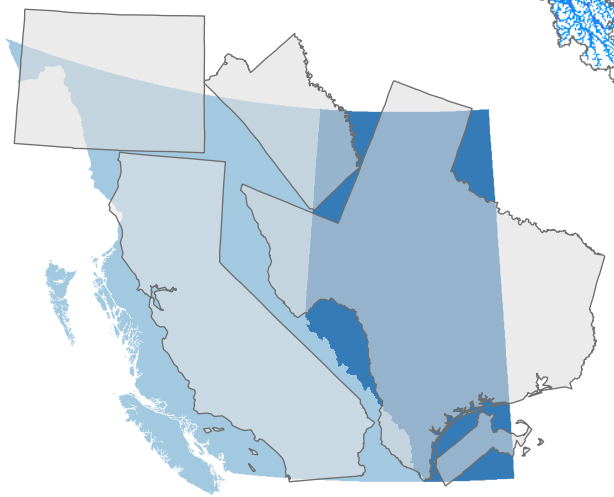
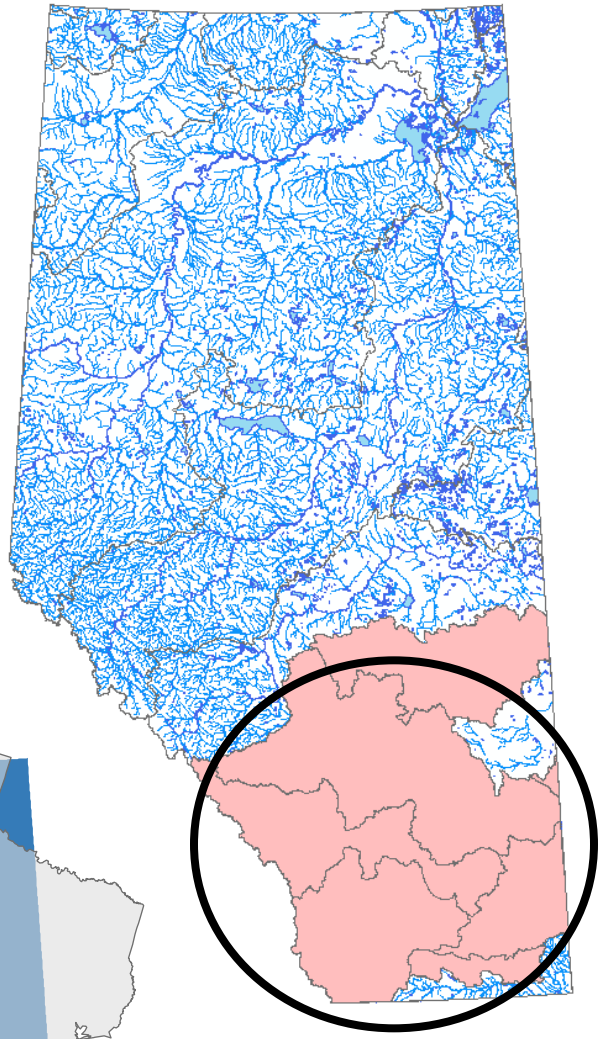
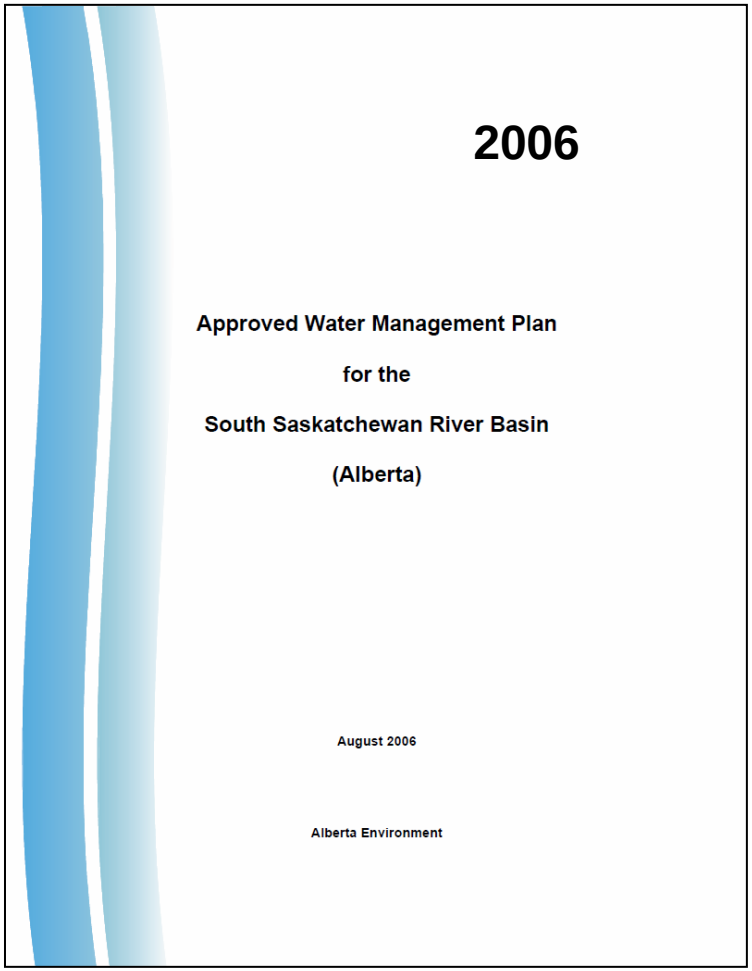
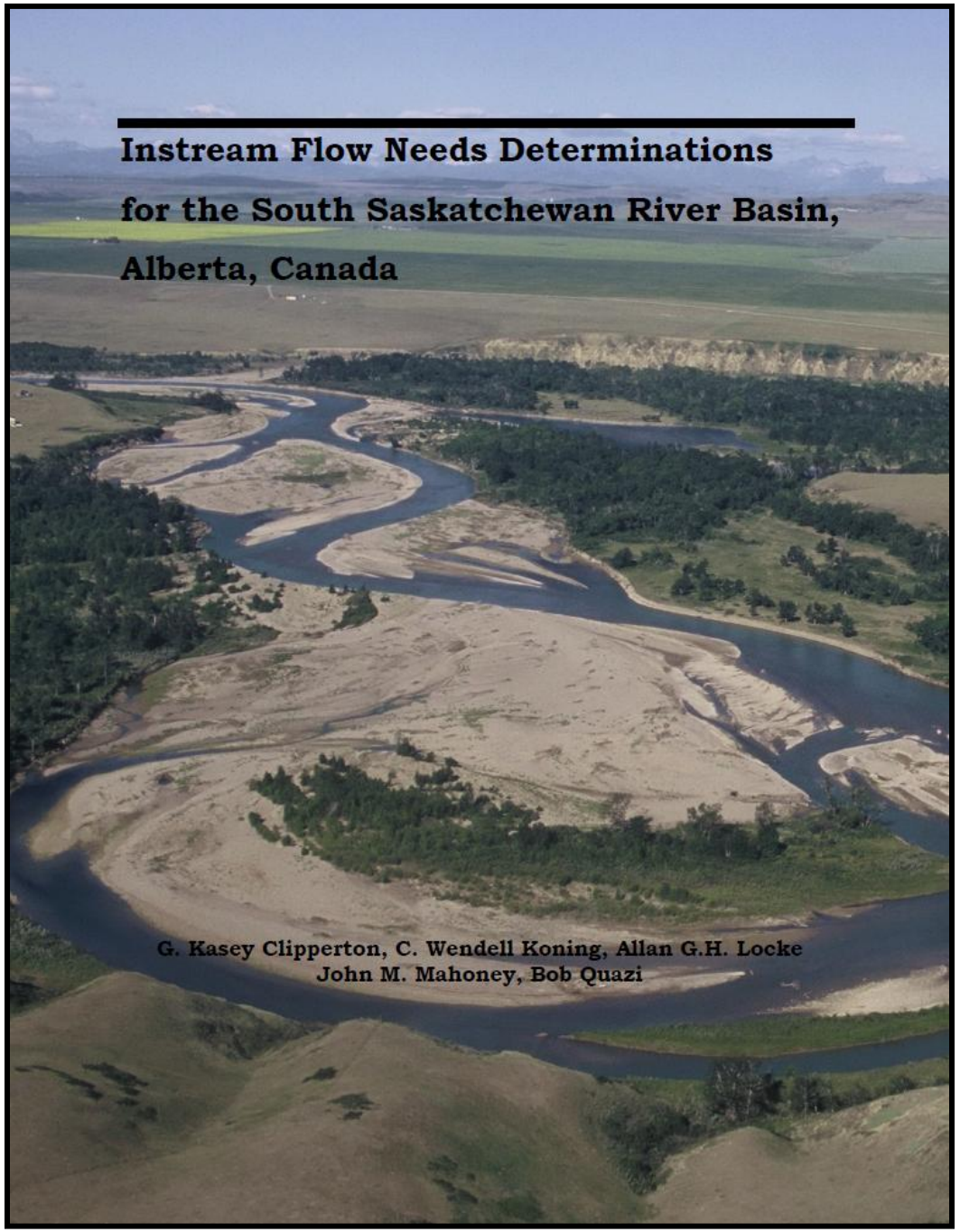
Basin-Wide Water Management Plans in Alberta



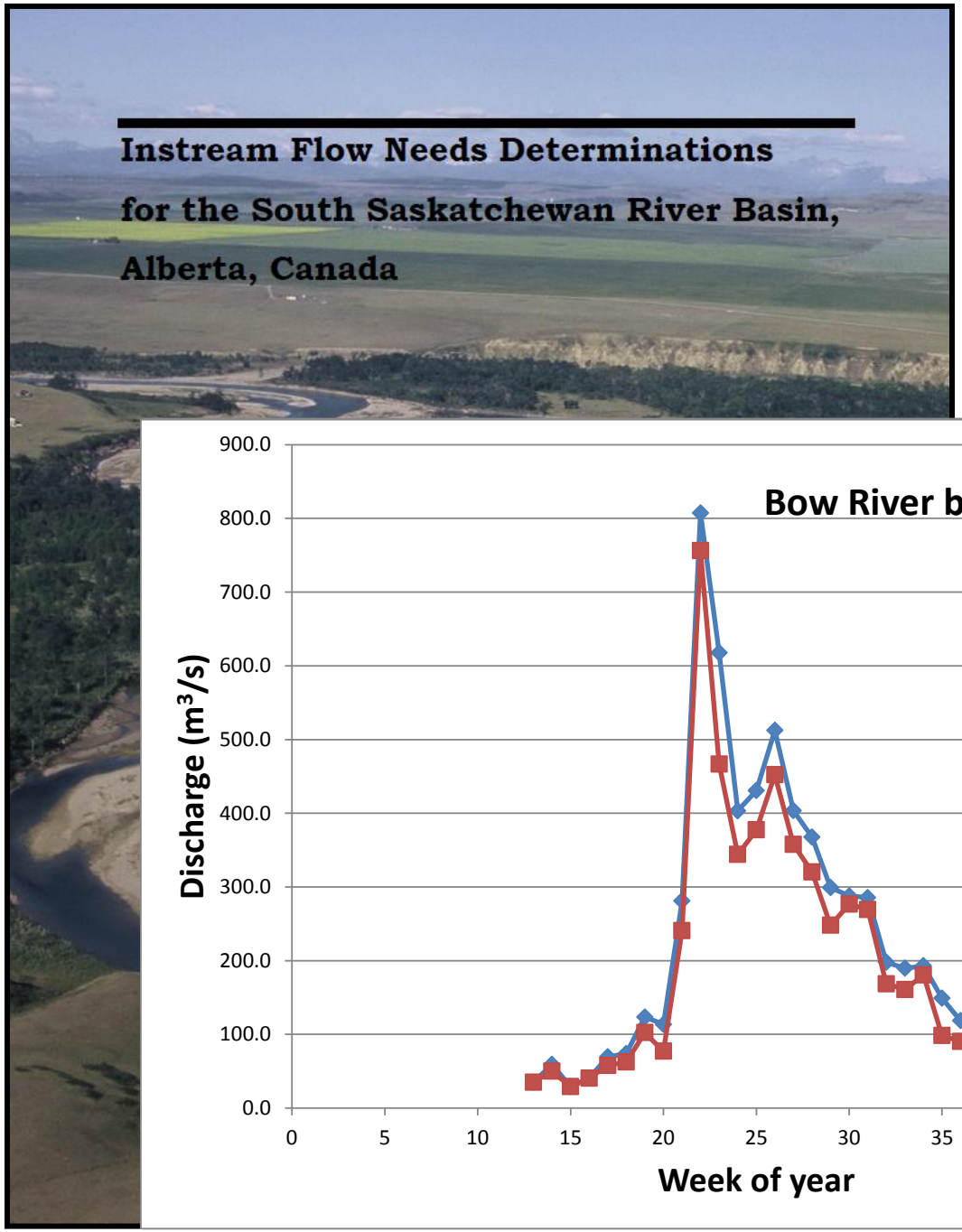




"…no longer accept applications for new water allocations in the Bow, Oldman and South Saskatchewan River Sub-basins…"



- report released 2003
- an IFN recommendation for full ecosystem protection
- first in Alberta to incorporate all five riverine components



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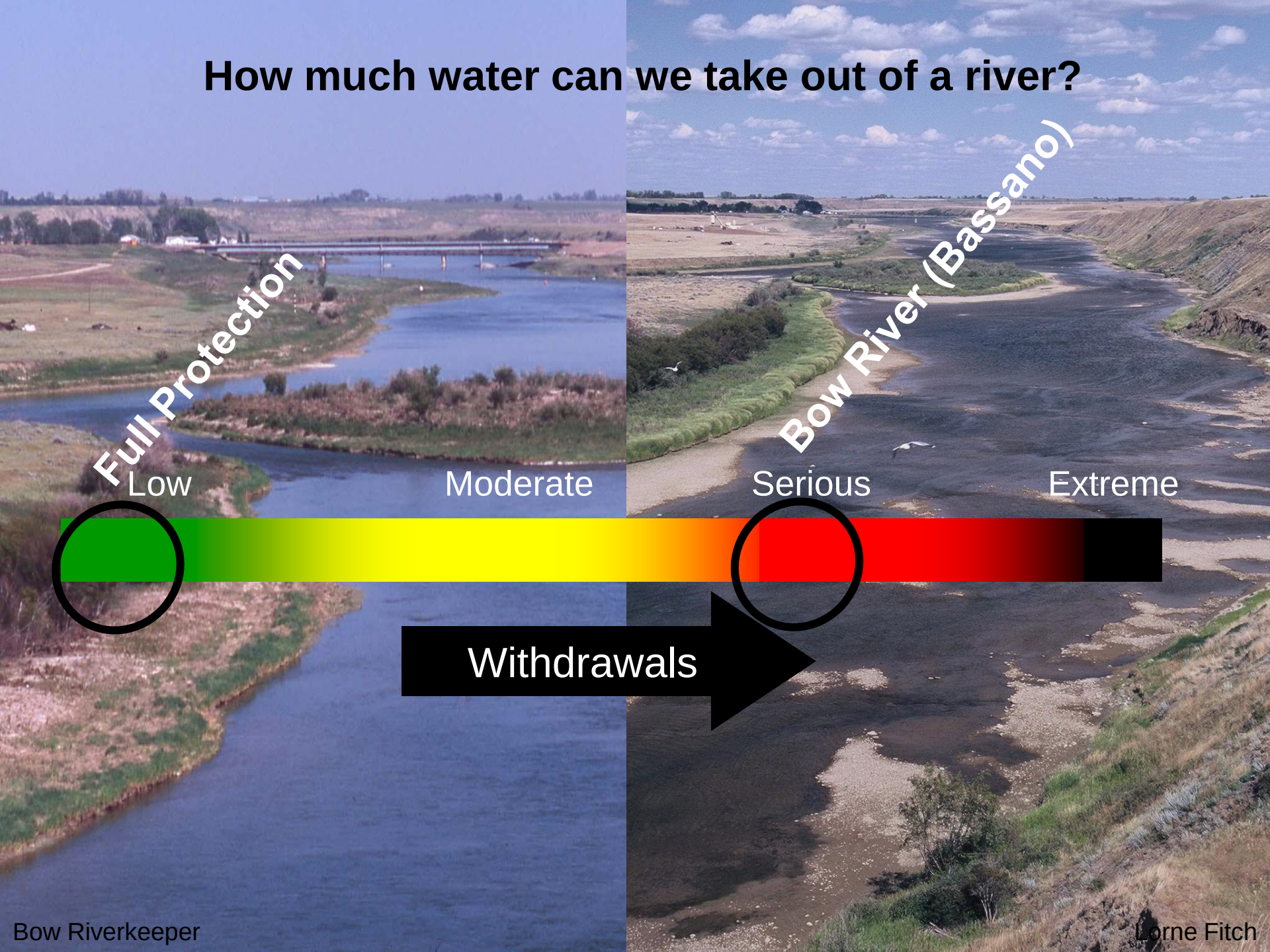
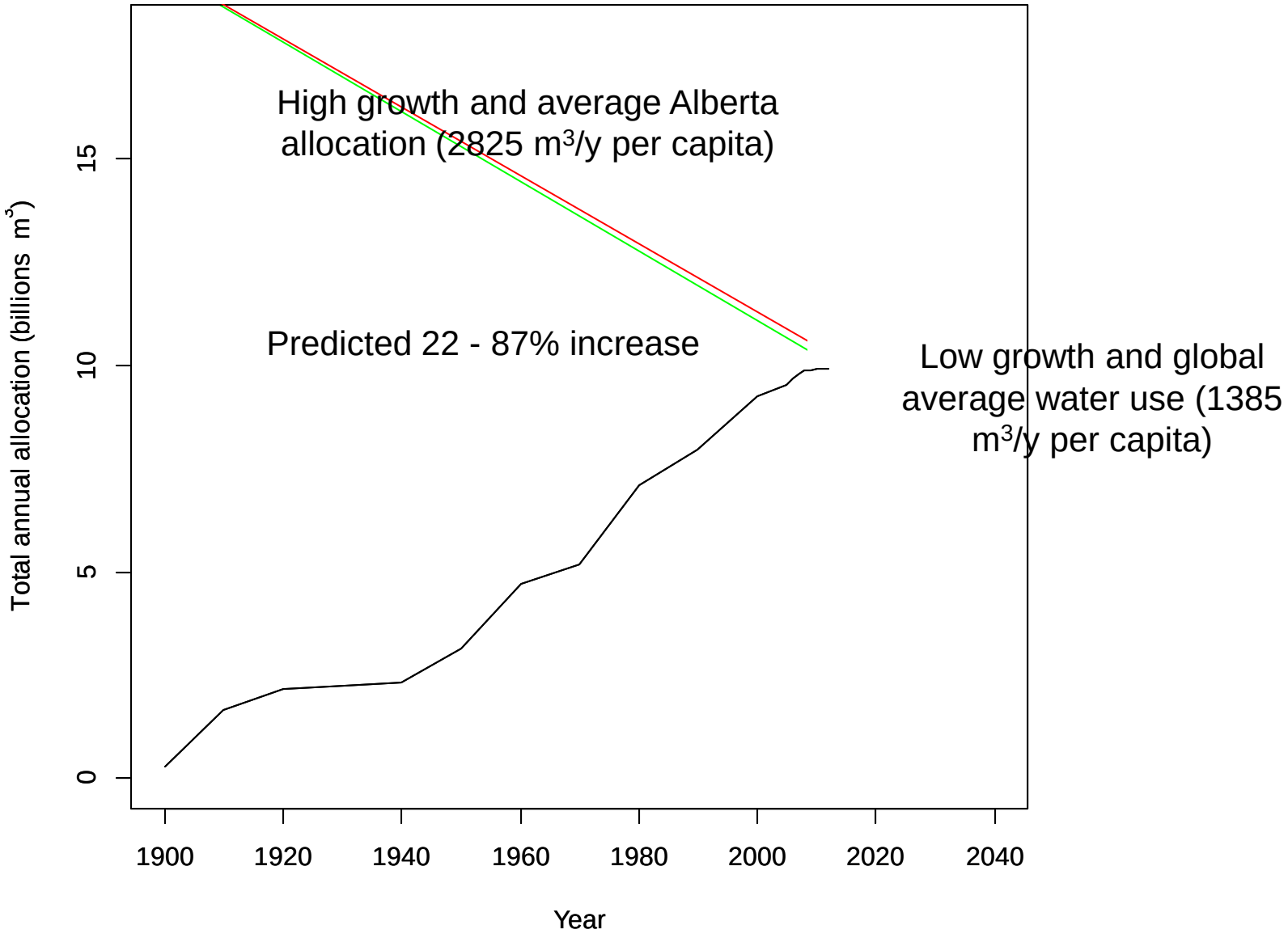
How much water can we take out of a river?



Bow Riverkeeper

Lorne Fitch

Alberta's Projected Total Annual Allocation (20 year projection; 2034)



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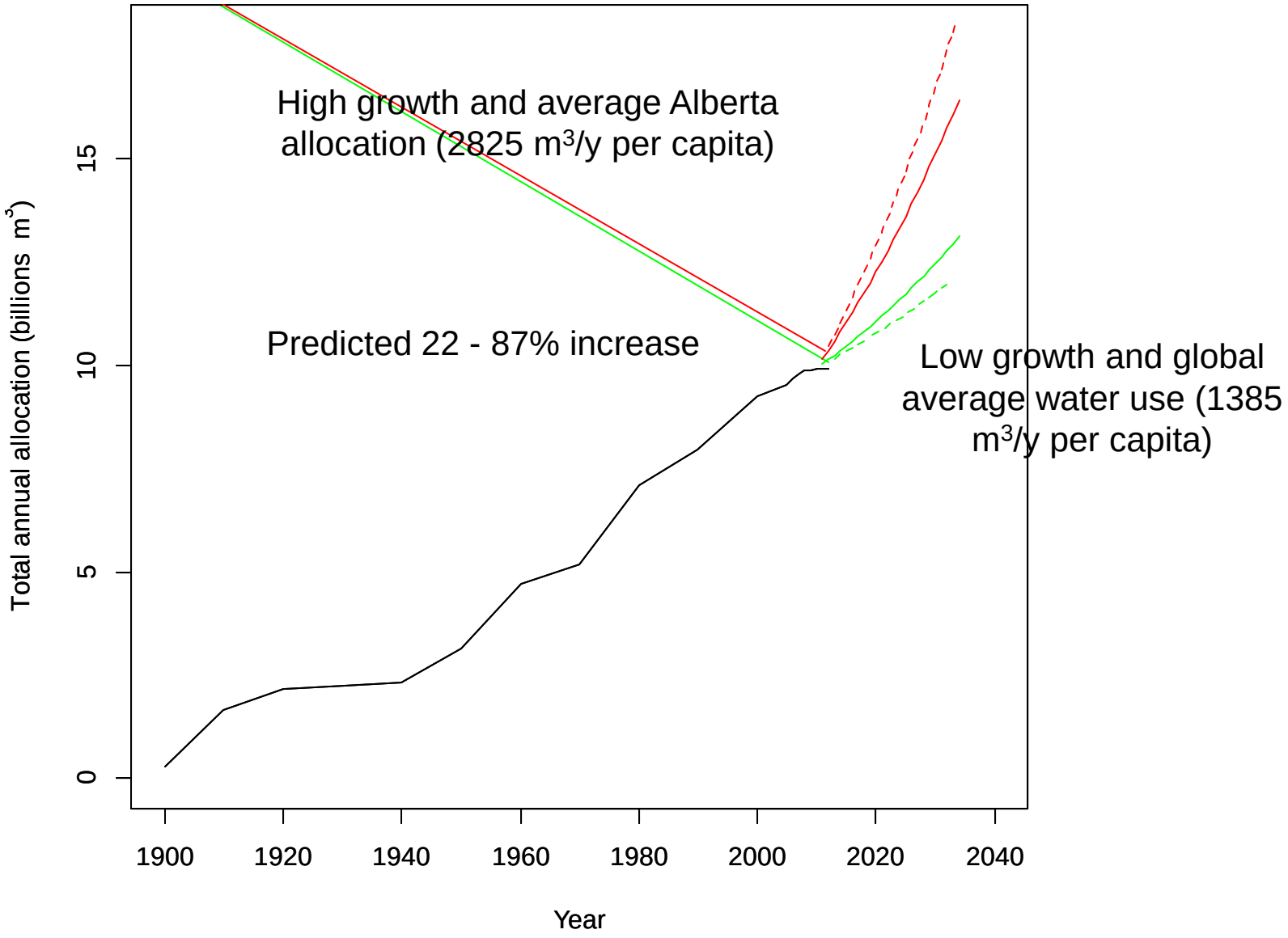
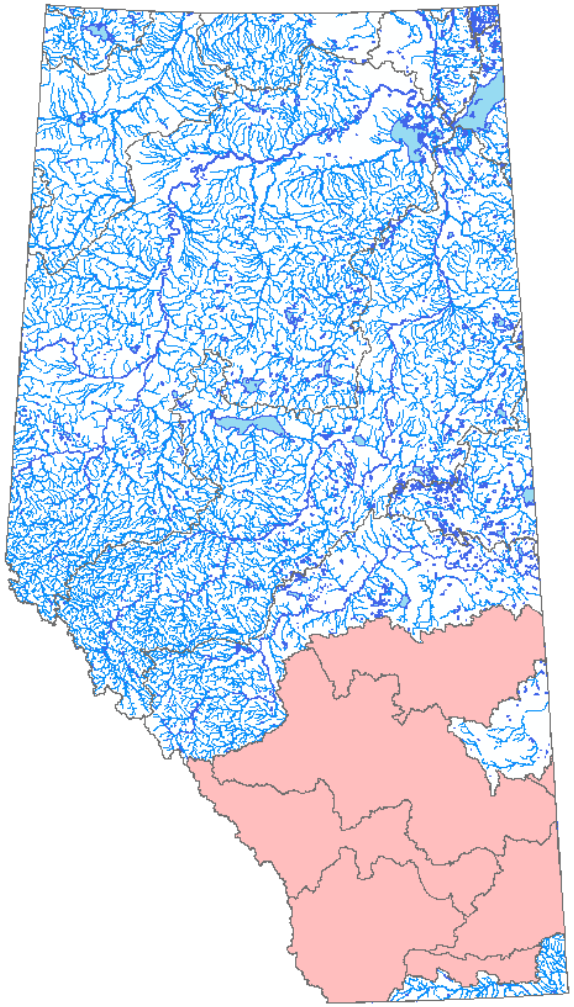
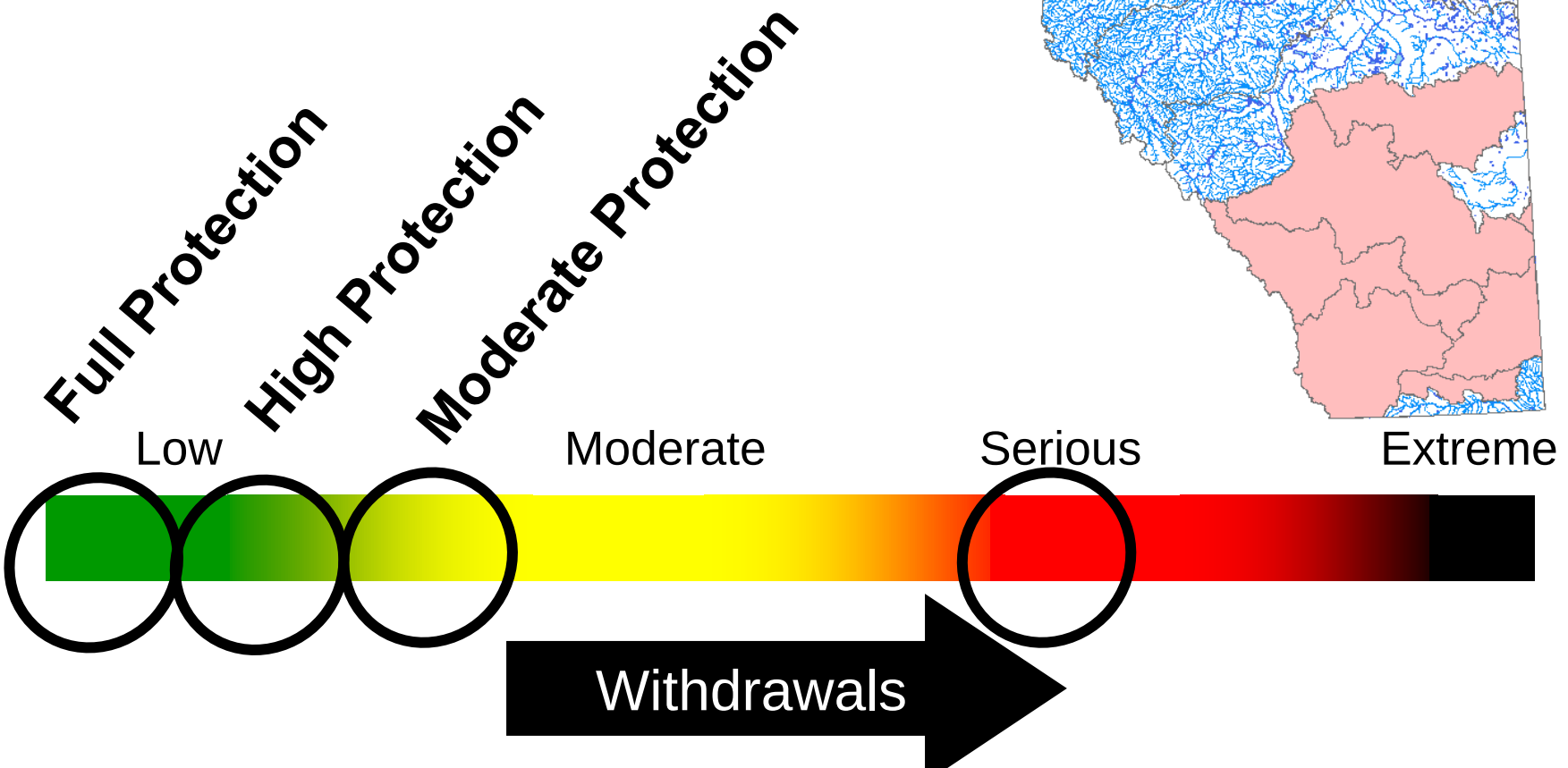


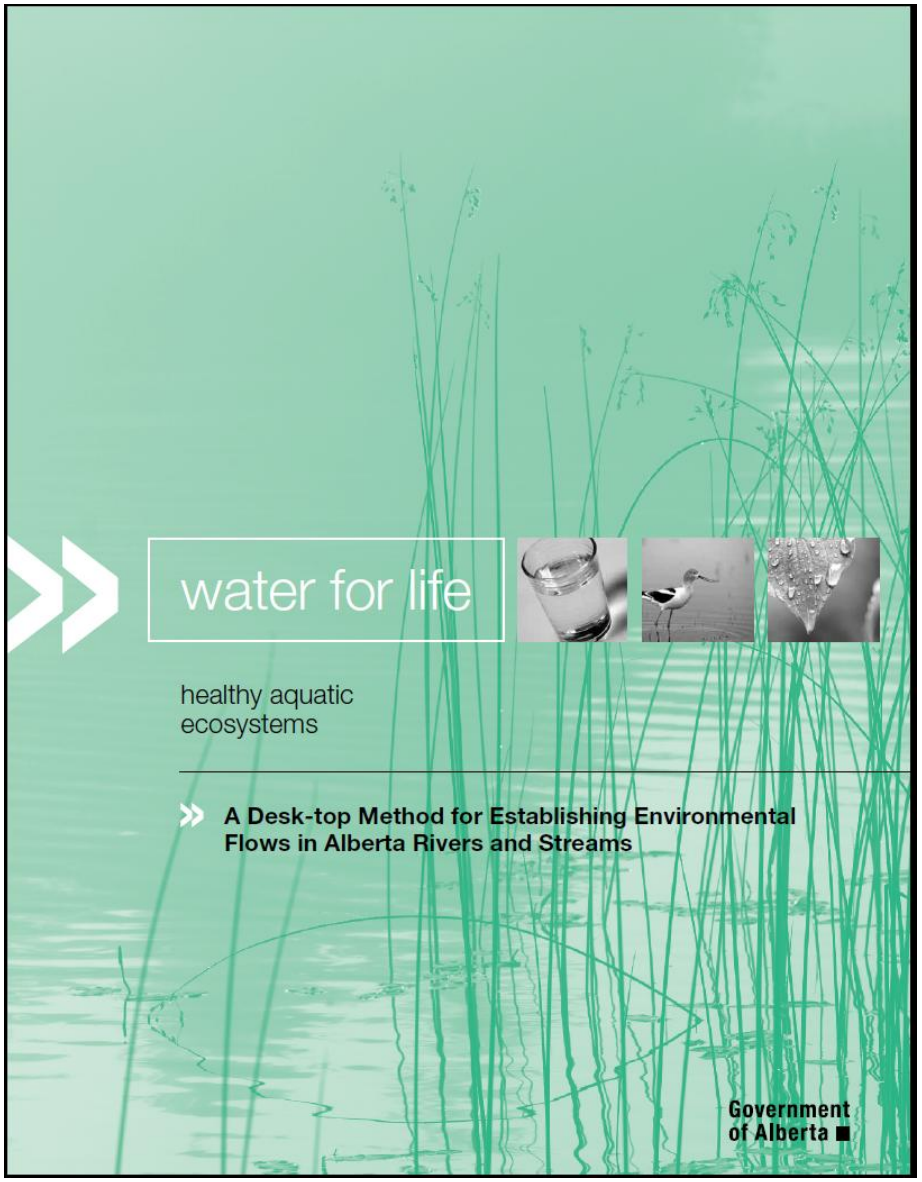
Proposed Provincial Water-Use Rules (Desktop Method)

-to be applied where Water Management Plans are absent





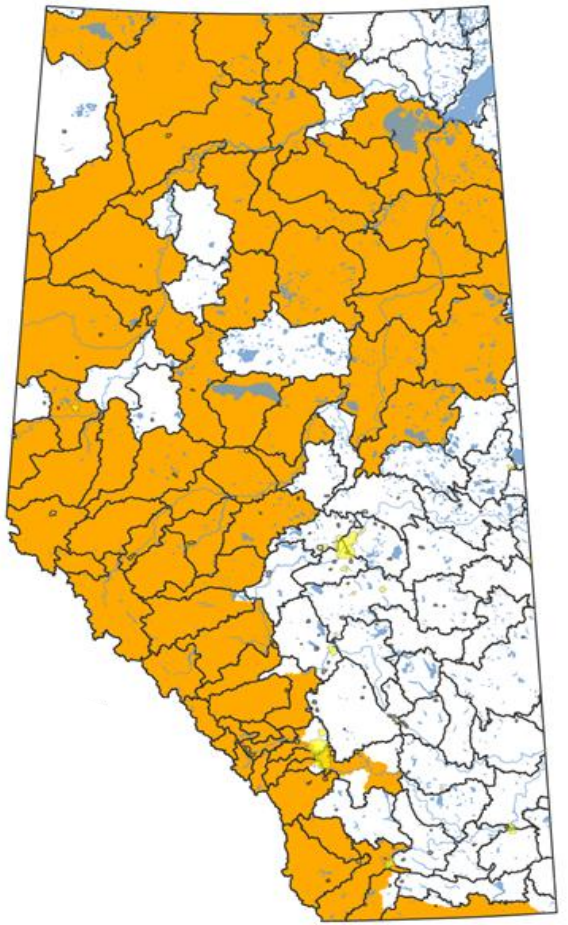
Alberta Desktop Method (ADM)



"The method provides a technique to estimate flows to meet the objective of ***full protection*** *of the riverine environment,…"*

Protection Levels

(1) Sensitive species



Protection Levels

(1) Sensitive species

(2) Stream size

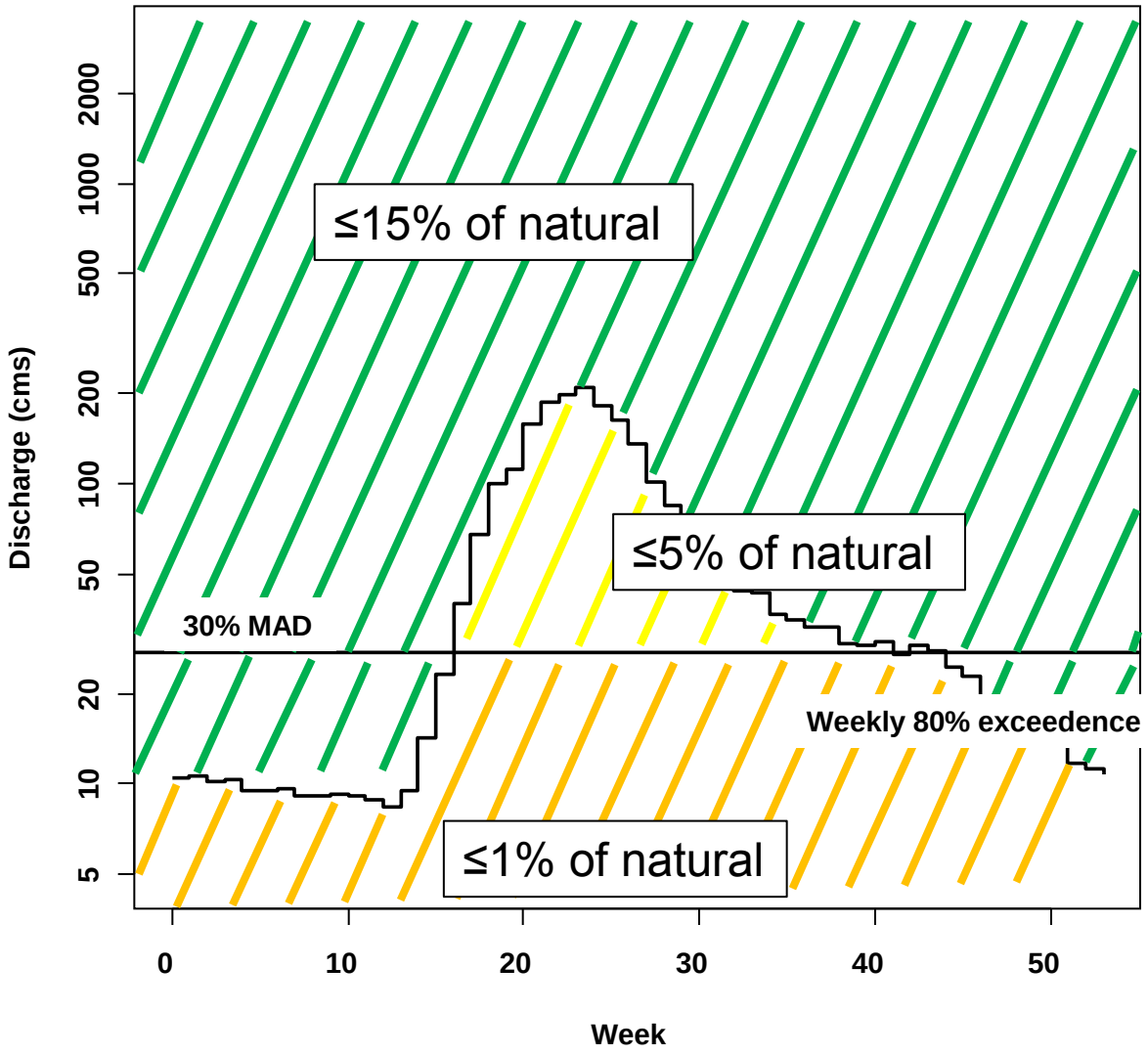
- **Increased protection for stream order ≤5**
- **Stream order used as data readily available (GIS)**

Wapiti River (Grande Prairie) – an example -naturalized hydrology 1968 - 2010

Stream order = 7

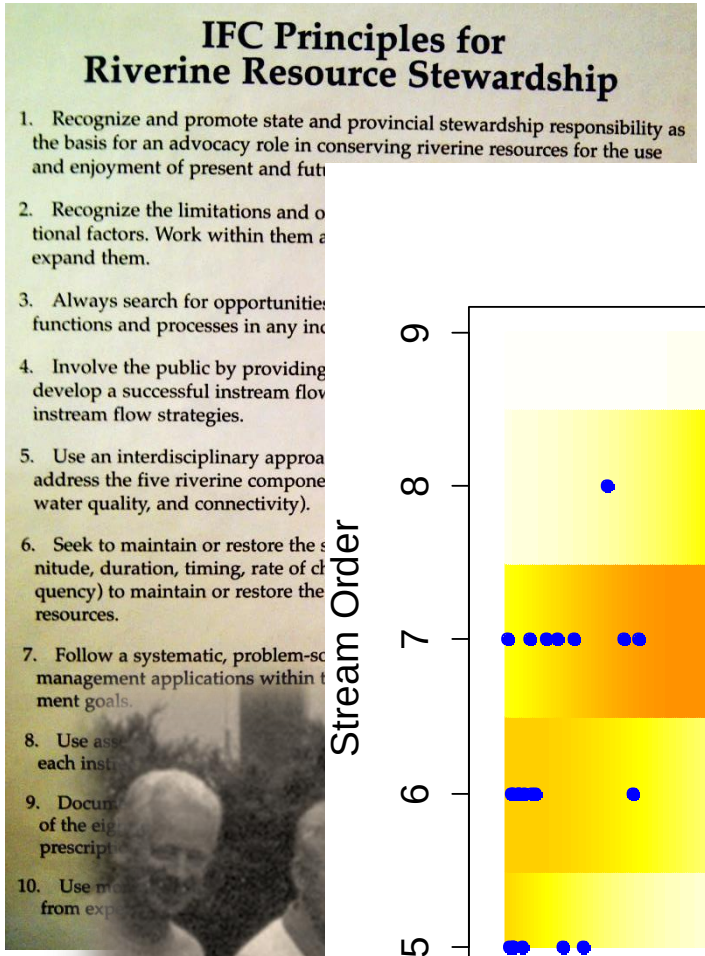
High Protection Level

High Protection



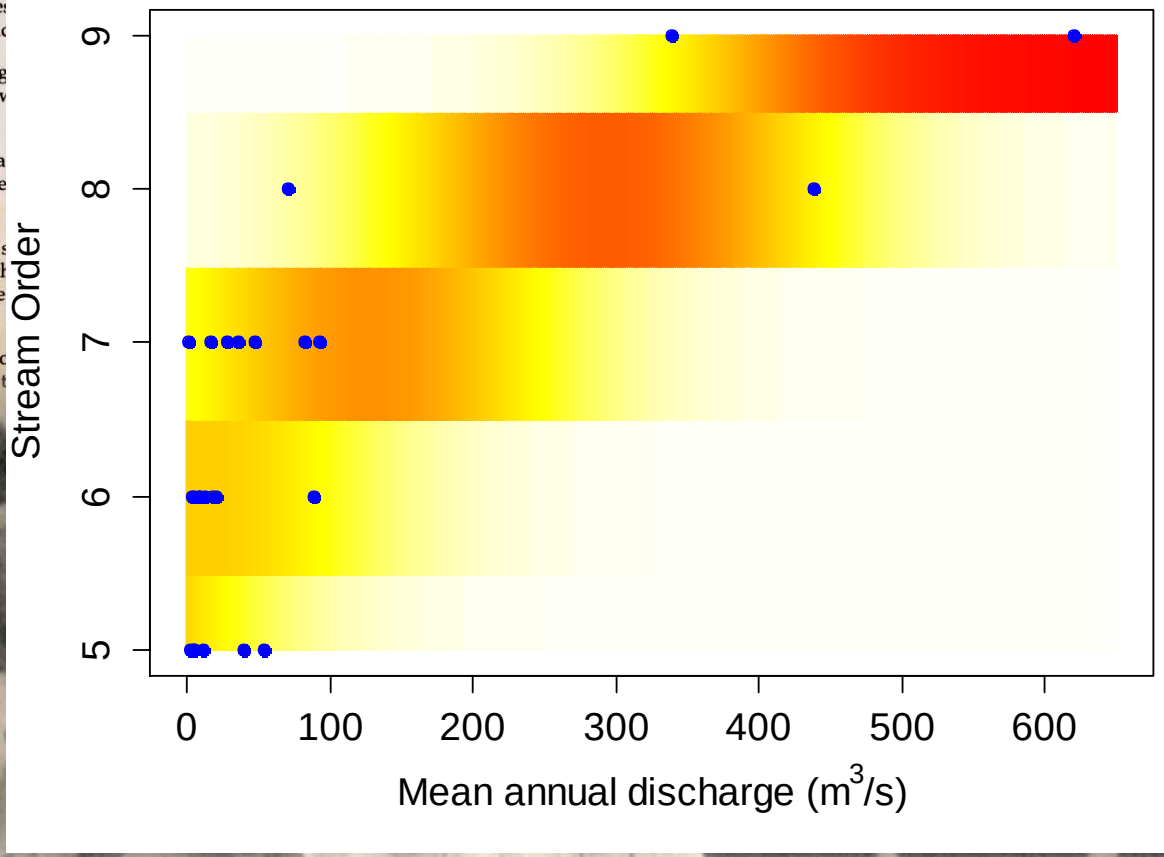
Uncertainty and Riverine Stewardship

"…quantify instream flow needs that address the five riverine components…"



IFC Principles for Riverine Resource Stewardship

1. Recognize and promote state and provincial stewardship responsibility as the basis for an advocacy role in conserving riverine resources for the use and enjoyment of present and futu
2. Recognize the limitations and o tional factors. Work within them a expand them.
3. Always search for opportunitie functions and processes in any inc
4. Involve the public by providing develop a successful instream flov instream flow strategies.
5. Use an interdisciplinary approa address the five riverine compone water quality, and connectivity).
6. Seek to maintain or restore the s nitude, duration, timing, rate of ch quency) to maintain or restore the resources.
7. Follow a systematic, problem-sc management applications within t ment goals.
8. Use ass each inst
9. Docum of the eig prescript
10. Use m from exp



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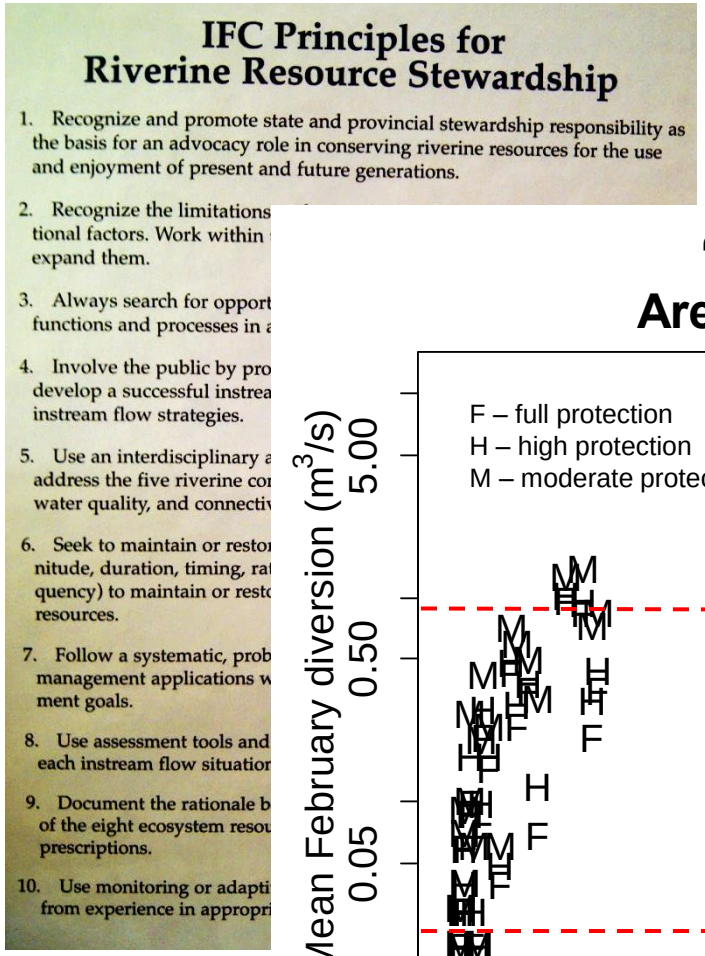

IFC Principles for Riverine Resource Stewardship

1. Recognize and promote state and provincial stewardship responsibility as the basis for an advocacy role in conserving riverine resources for the use and enjoyment of present and future generations.
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7. Follow a systematic, prob management applications w ment goals.
8. Use assessment tools and each instream flow situatio
9. Document the rationale b of the eight ecosystem reso prescriptions.
10. Use monitoring or adapti from experience in appropri

"Recognize the limitations and opportunities imposed by legal and institutional factors. Work within them…"

'Social' uncertainty
Are we willing to say 'No'