What We Can Learn From The Ice

Science & the Future Landscapes of the Canadian West

A presentation by

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Our headwaters National & Provincial Parks Network
One of the greatest public policy achievements in the history of the West
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“See This World Before The Next”
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Why Glaciers Matter

Photographs of the Illecillewaet Glacier in Rogers Pass from the Vaux Family Collection
Courtesy of the Whyte Museum of the Canadian Rockies and Dr. Henry Vaux Jr.

1902

2002
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Courtesy of Mike Demuth, Geological Survey of Canada
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Glaciers in the Bow River drainage were reduced in area by 25% in the last 50 years

Who Are Our Main Water Users?
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We take reliable hydro-electric power generation for granted. Can we still?
Agriculture could be more important in the future than oil and gas provided it is able to address water quality and availability issues related to agricultural practices.
We are facing public policy trade-offs that we have never had to be made on a global scale before

- Cities, people, agricultural and nature all need water
- Cities are competing with agriculture and nature for water
- To provide nature with the water it needs in the arid regions of the world we have to accept that people will starve
- If we provide all the water agriculture needs to meet the food needs of a growing global population then natural systems will decline

Which do we choose?
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The growing water needs of the energy sector

Future development could be limited by water availability
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Municipal Water Supply Planning
Also depends on reliable information of
snowpack and snow cover
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Tourism & Recreation:
Water As An Attraction in Its Own Right
Recent studies suggest that 73% of the alpine tundra in the Western United States can no longer be classified as such.
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Marmot Creek in Kananaskis

Even non-glacial mountain watersheds are changing

Courtesy of John Pomeroy
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Nature As A Water User In & Of Itself
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The Political Process As A Key Water Information User
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We Can Do Much Better
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Improving Water Security Through Integrated Observation & Prediction Networks