Watershed Values

- Water Yield
- Flow Regime
  - Timing of snow melt
  - Flooding
  - Peak Flow changes
  - Late summer flows
- Water Quality
  - Sediment, Nutrients,
  - Temperature
  - Fisheries
  - Drinking water

- Modelling of Strategic Planning
  - C5 DFMP
  - 15 % increase

- Operational considerations
  - AB operating ground rules
  - Stream Buffers
  - Roads
  - Crossings
  - Soils

AB planning Requirements

- Water Yield Modelling
- 15 % change limit

- ECA AB (Silins 2000)
- WRENNS (Swanson, 200)

C5

- Both methods (WRENNS and ECA AB)
- Rothewell, 2006
- Also includes changes to peak flows

Summary

- Max increase 13.8 % - Beaver creek
- Min increase 0.2% - Pincher creek

Summary

- The results indicate that simulated increases in annual yield, ECA, and peak flows are likely not significant and **well below the detection limit using standard hydrometric techniques**.
- The simulated increase in annual water yield and maximum daily flows should not be a significant threat to aquatic habitats.
- Measurable Indicator and targets?
- MPB, wildfire, prescribed fire?

Conclusion

- It is recommended that work be undertaken to develop guidelines to minimize the potential impact of changing peak flows and water yields.

Responses already underway

- Acquire forest hydrologists for the province
- Invest in Forest Hydrology research
  - eg Lost Creek (Silins)
    - Post fire
    - New phase of MPB, and risk mitigation

Questions