The International Joint Commission Kootenay Lake Board of Control

Columbia Basin Regional Advisory Committee
March 9, 2016
Castlegar, BC

Presented by:
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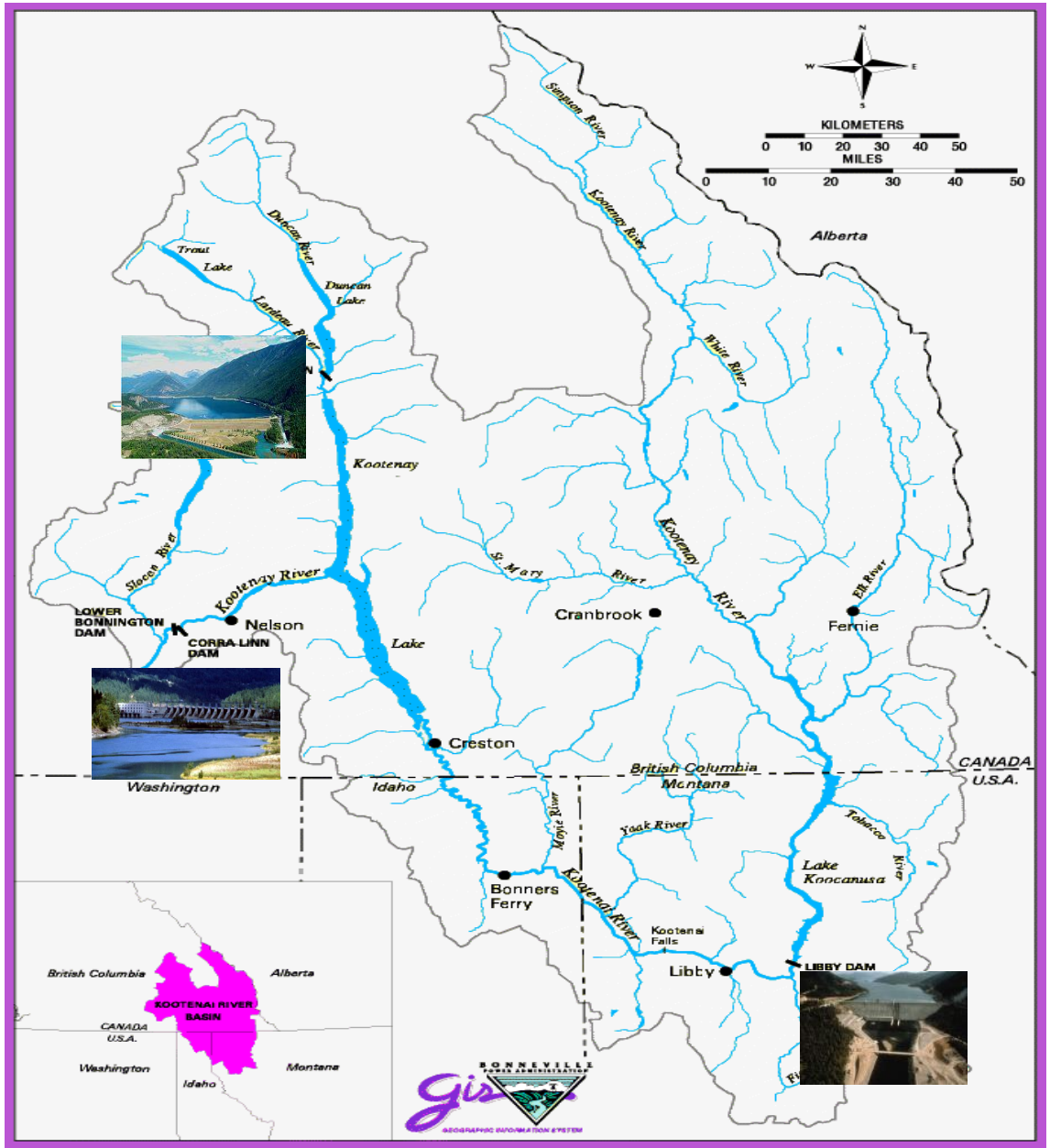
Kootenay(Kootenai) Basin



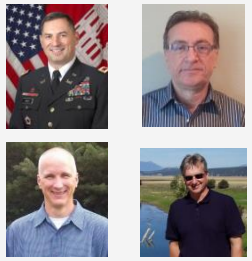
IJC Context

'Boundary Waters Treaty'

1909 Treaty Between the United States and Great Britain (*for Canada*)

International Joint Commission (IJC)

Corra Linn Dam
IJC Kootenay Lake Order of Approval



International Kootenay Lake Board of Control

International Joint Commission

Lana Pollack U.S., Chair

Gordon Walker Canada, Chair

Rich Moy, U.S.

Dereth Glance, U.S.

Richard Morgan, Canada

Benoit Bouchard, Canada

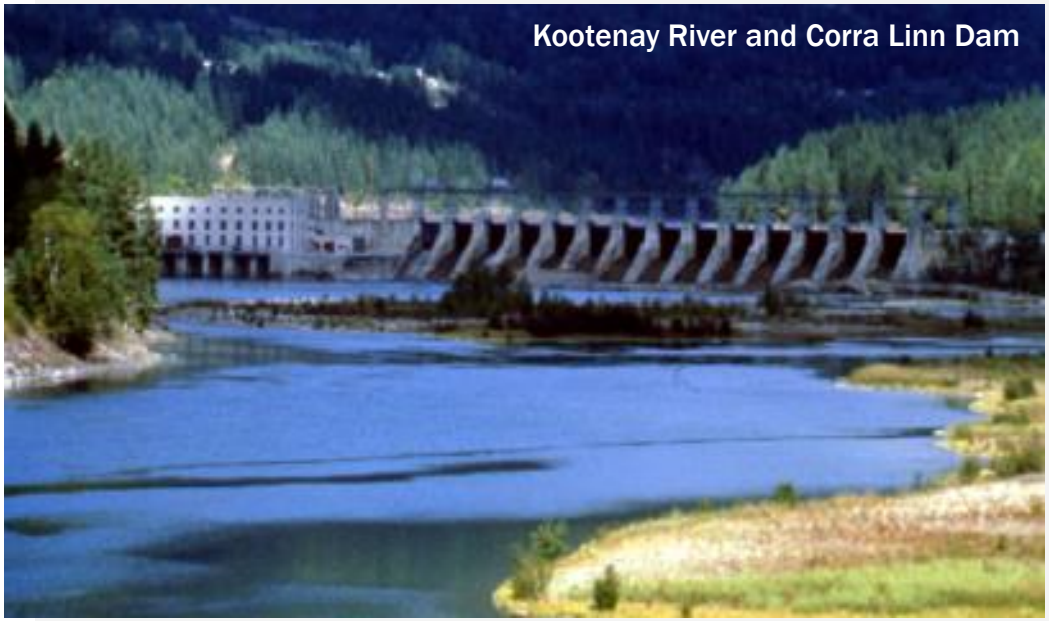
International Joint Commission

- To prevent and resolve Canada/US water issues, the Commission…
  - Receives applications and references on transboundary issues
  - Notifies public, undertakes studies and holds hearings to inform decision
  - Issues Orders (e.g. 1938 IJC Order for Kootenay Lake)
  - Issues recommendations (i.e. for reference cases)
- The Commission appoints Boards of Control to monitor compliance with terms of IJC Orders

Kootenay Lake Board of Control

- Duties of the Kootenay Lake Board of Control…
  - Monitor FortisBC's operation of Corra Linn Dam for compliance with terms of IJC Order (e.g. maximum water levels on Kootenay Lake)
  - Assure all other provisions of the 1938 IJC Order are followed
  - Hold annual meetings, report and provide general support to the IJC on issues relating to the 1938 IJC Order

1938 Kootenay Lake Order



- Kootenay Lake Order relates to Corra Linn Dam (FortisBC).
- 1929: West Kootenay Power sought IJC approval for Corra Linn Dam & 6 ft of water storage in Kootenay Lake.
- 1938: IJC Order of Approval for Corra Linn Dam
  - Required excavation at Grohman Narrows

- Issue: The dam can affect Kootenay Lake levels and cause backwater effect up Kootenai River into Idaho.
  - Article IV of Boundary Waters Treaty applies

1938 Kootenay Lake Order

- Directs FortisBC to help pay Idaho farmers to offset increased pumping costs for land drainage

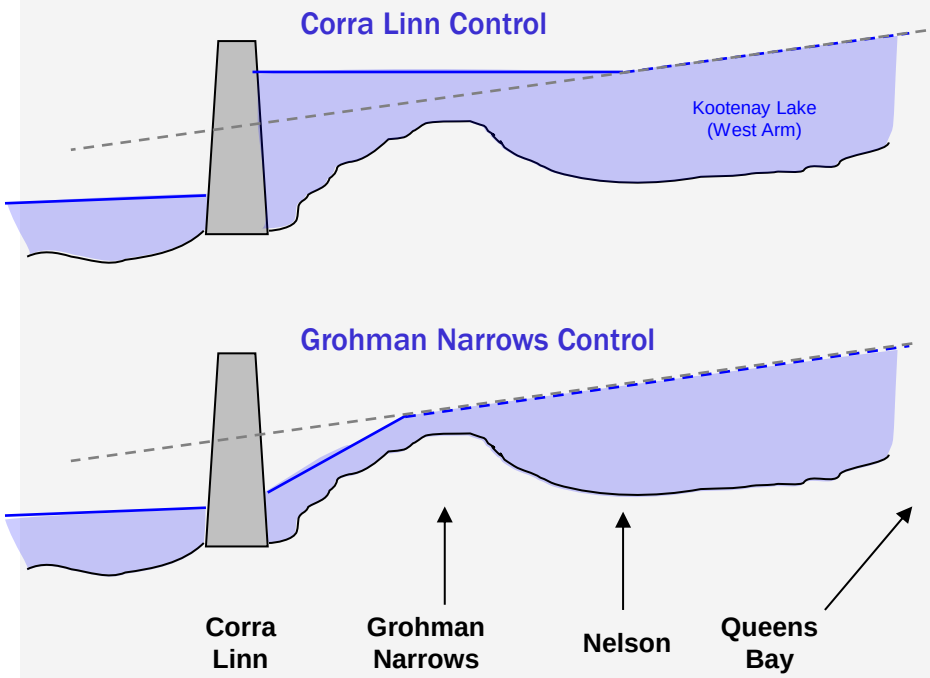
1938 Kootenay Lake Order

- Directed original Applicant (WKPL) to dredge Grohman Narrows (completed in the early 1940s)

1938 Kootenay Lake Order

- Directs FortisBC to take advantage of the channel improvement at Grohman Narrows to lower peak water levels on Kootenay Lake

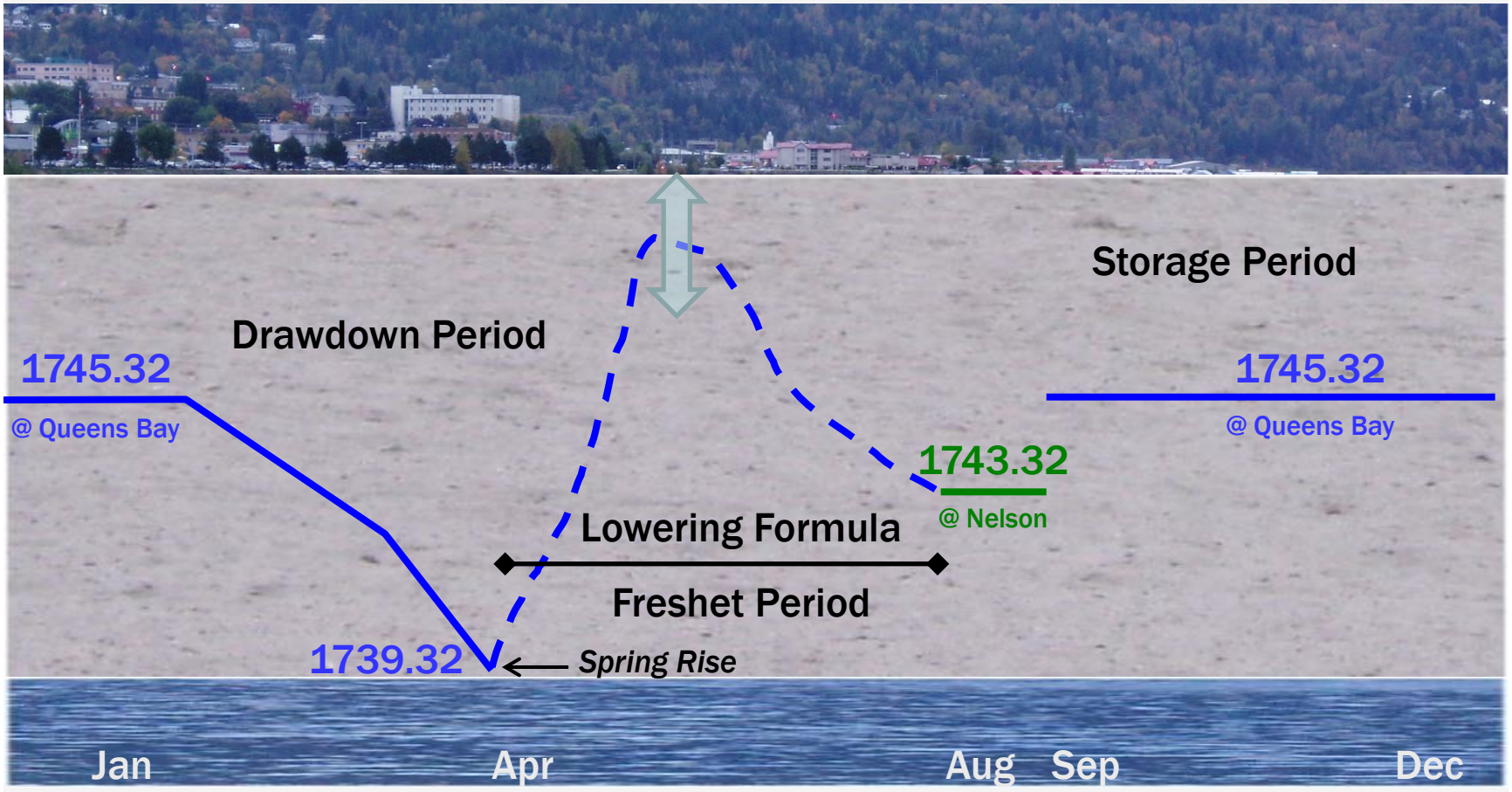
Kootenay Lake Control



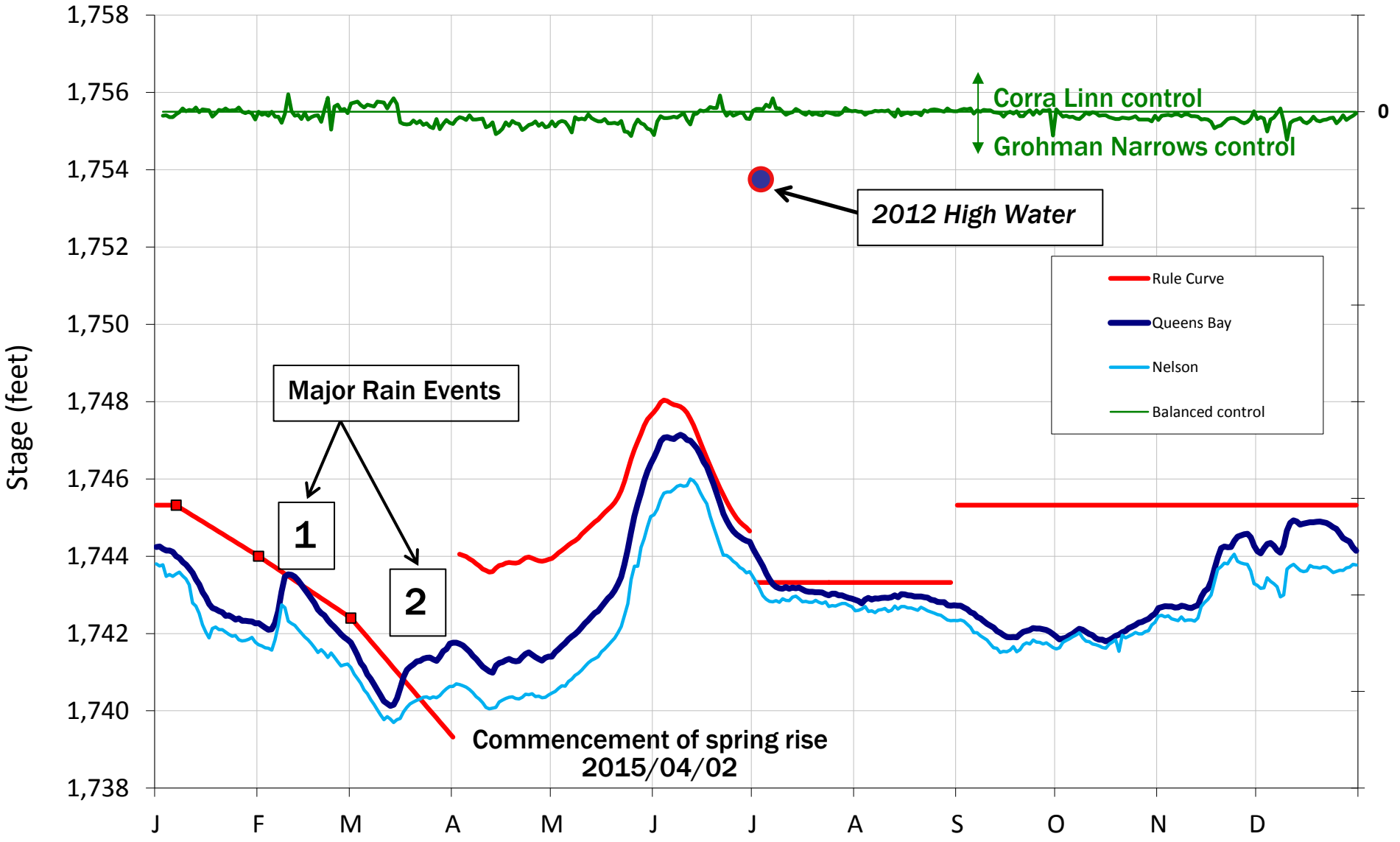
- Lake level depends on balance of inflow and outflow
- Corra Linn dam does not have exclusive control of lake outflow
- When the Corra Linn forebay is kept low, control moves upstream to the channel constriction at Grohman Narrows

1938 Kootenay Lake Order

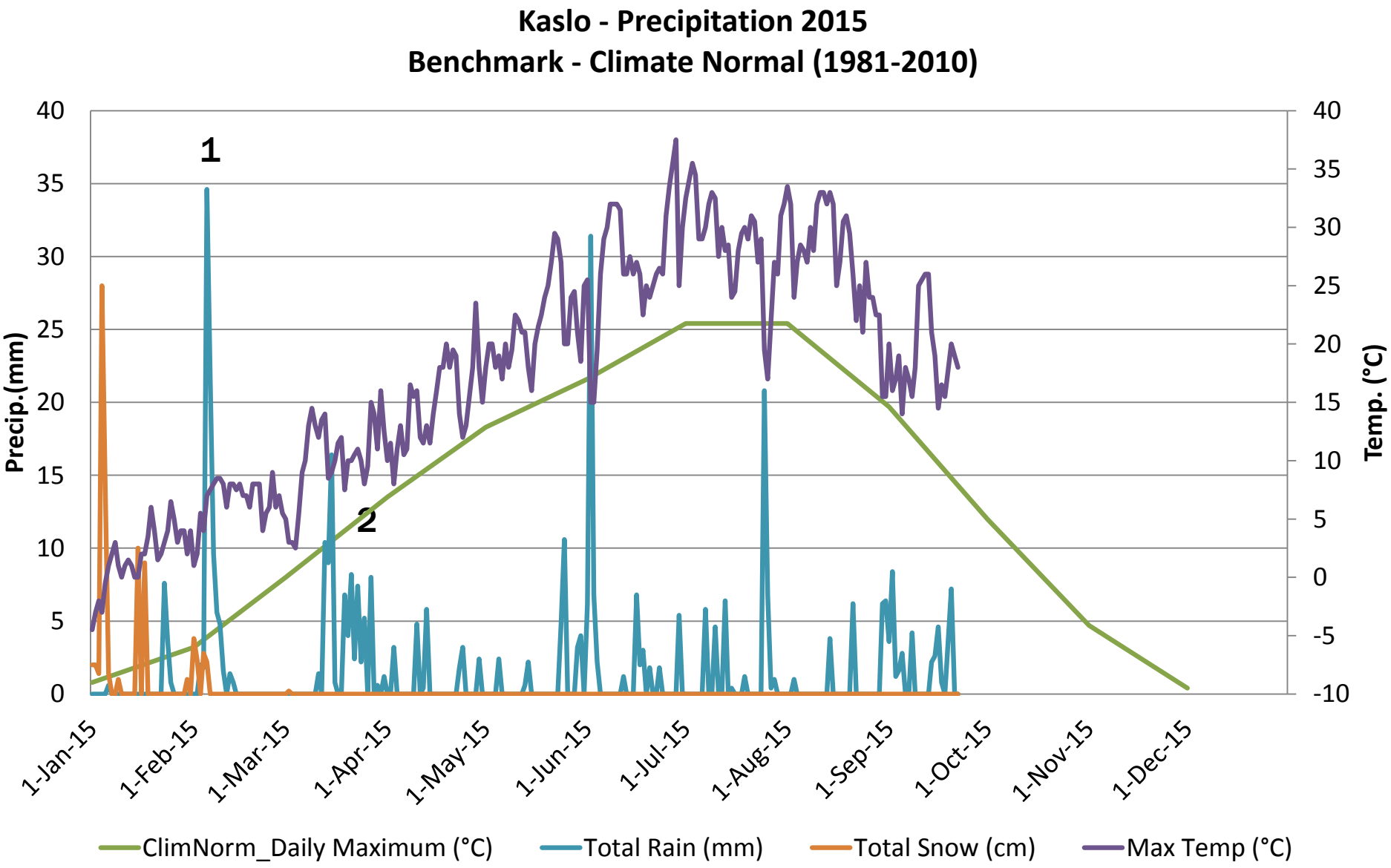
Maximum Water Elevations Ordered



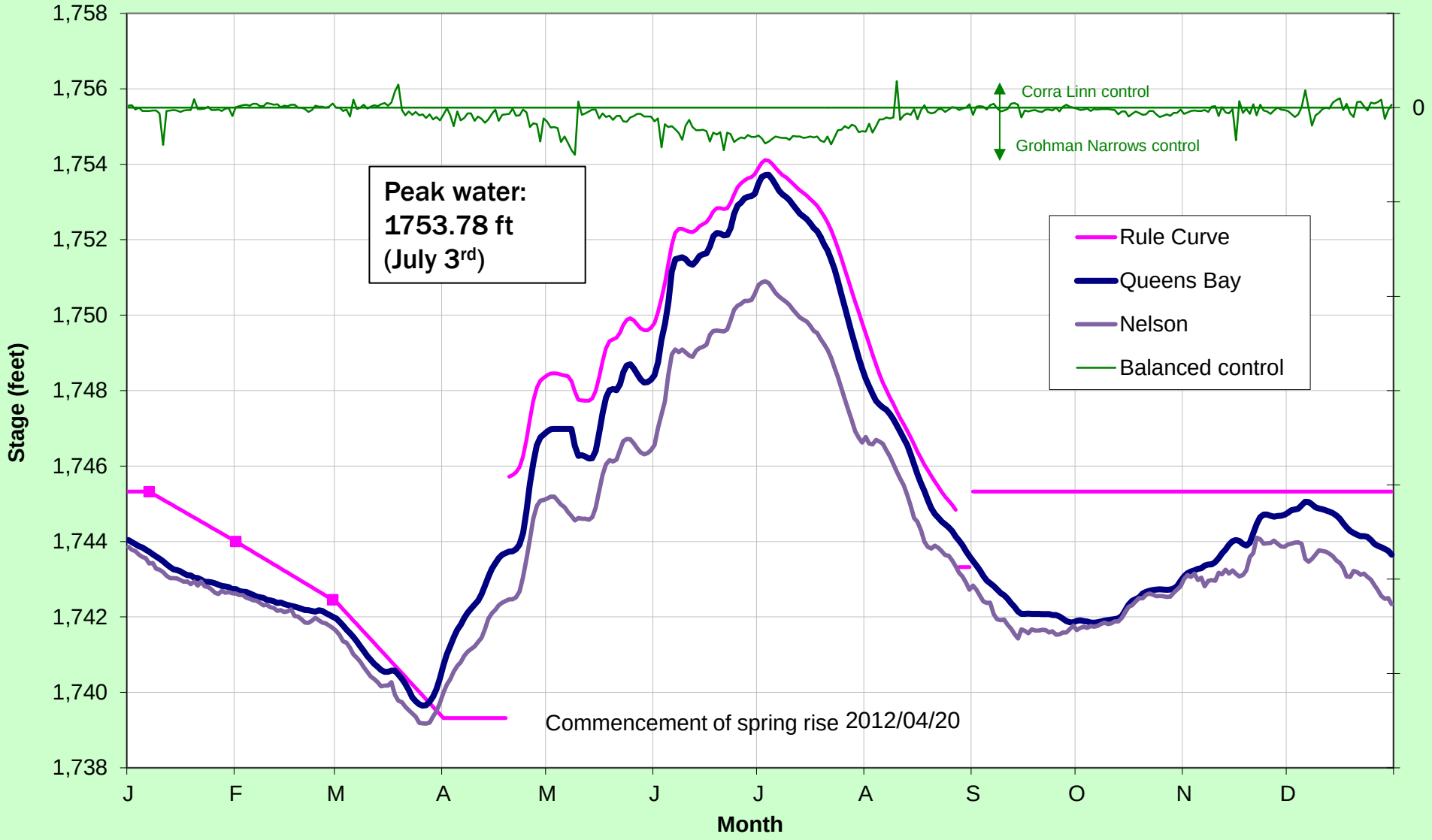
Kootenay Lake in 2015



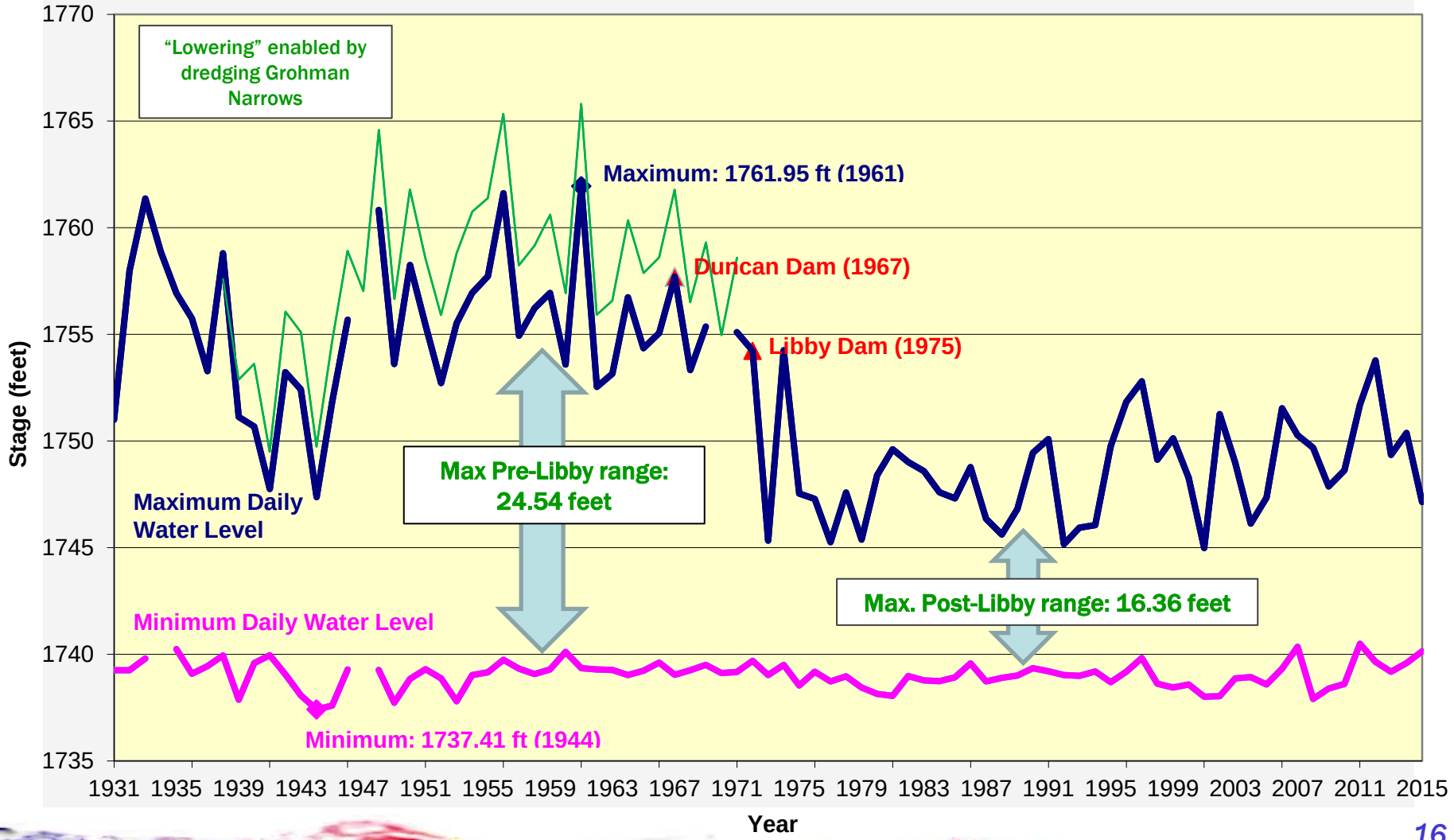
Precipitation Anomalies 2015



Kootenay Lake in 2012



Water Level Extremes: Kootenay Lake (Queen's Bay)



Summary

- IJC Order dictates maximum water level conditions on Kootenay Lake.
- To date, exceedances have been due to natural climate effects and influence of upstream CRT operations (no cases of non-compliance).
- The CRT operations reference the IJC Order
- The range of water level variation on Kootenay Lake has been reduced following development of upstream CRT dams.
- 2015 El Niño: winter rain storms & run-off events (exceedances of IJC rule curve) and low peak water levels on Kootenay Lake.
- 2012 high water conditions: more manageable winter conditions but early onset of lake rise due to upstream CRT flood management operations.
- Grohman Narrows is limiting factor on Kootenay Lake discharge during high water periods.

Thank-you!
Comments/Questions?