Columbia River Treaty Update

Water Policy Interim Committee

September 11th, 2012

Northwest Power and Conservation Council

NWPCC

- A Council with 2 members from each state: MT, ID, OR, and WA
- Develops a 20-year power plan
- Develops a fish and wildlife program to mitigate impacts of the FCRPS
- BPA resource decisions must be consistent with the plan, and other federal agencies' fish & wildlife decisions must consider the Council's plan

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Columbia River Basin

- Flow is more variable than other major rivers
- Canada contributes ~1/3 of annual flow at The Dalles
- 41% of system storage in Canada
- Largest hydropower capacity (~37 GW) in North America

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Key Dates in the CRT History

- 1909: Boundary Waters Treaty
- 1943-44: International Joint Commission and Corps begin Columbia River studies
- 1948: Columbia River Flood
- 1948-59: Treaty analysis conducted
- 1950: Flood Control Act of 1950 authorized FCRPS
- 1961-64: CRT signed and ratified
- 1967-73: Treaty dams built
- **2014**: latest date to give 10-yr notice of termination
- **2024**: earliest possible termination date for CRT

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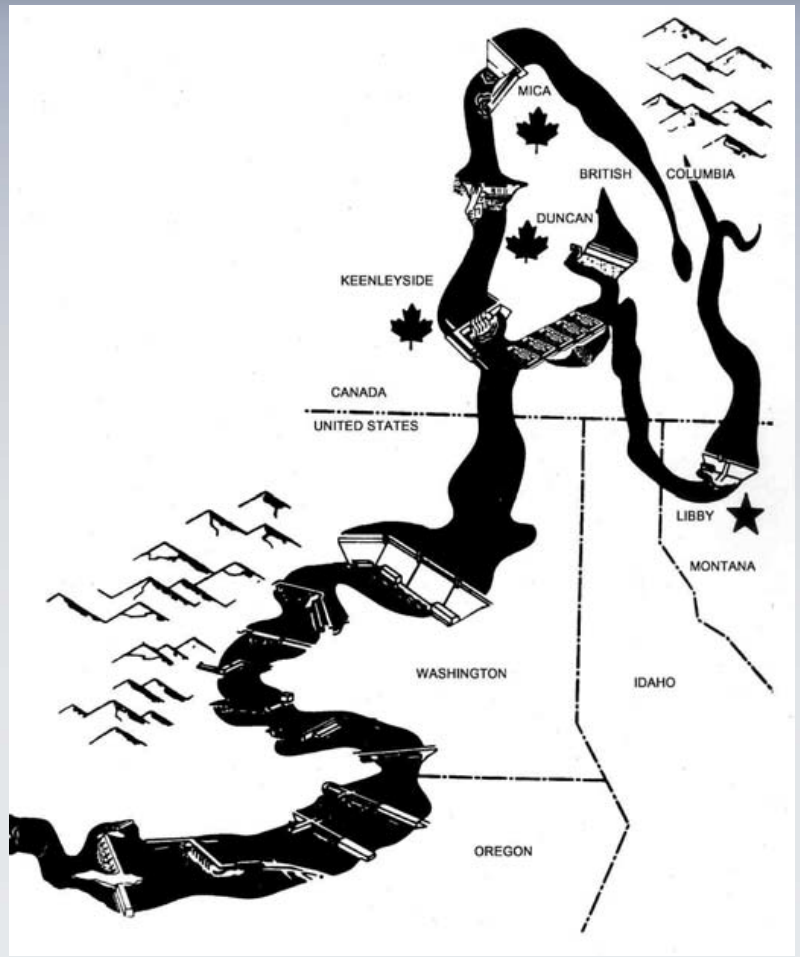
Columbia River Treaty

- Treaty storage
  - Reduces flood flow and spill
  - Shifts power generation
- Provides $100 million of annual mutual benefits
- Treaty motivated additional infrastructure and governance



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General Provisions

- Required Canada to construct and operate Mica, Arrow, and Duncan = 15.5 Maf
- Allowed U.S. to construct and operate Libby = 5 Maf
- U.S. and Canada share equally in the downstream power benefits produced in the U.S. from Canada Treaty operations
- BPA and Corps are U.S. entity; B.C. Hydro is Canadian entity

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Power Provisions

- Optimized power generation
- U.S. delivers power = ½ benefit from coordination
  - Currently worth $250-300 million/yr
- BPA delivers entitlement to B.C.
- Five Mid-C hydro projects deliver 27.5% of entitlement to BPA

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Flood Control Provisions

- Canada operates 8.95 MAF in “Assured Operating Plan”
- Canada operates all additional storage on an “on-call” basis
- U.S. paid $64.6 million in 1973 for half of the expected future flood damages prevented
- This purchase of flood control operation expires in 2024

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Treaty 2014/2024 Review

- No specified end date, 10-yr noticed needed to terminate
- Current flood control procedures will end in 2024 regardless of Treaty status
- Department of State asked for regional recommendation
- Sovereign Review Team process underway
- Regional recommendation expected in Fall of 2013

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Possible Futures

Treaty Scenario:	Post 2024 Power Operations	Post 2024 Flood Operations
Treaty Continues	•Coordinated optimized power operation continues •U.S. continues to deliver Canadian Entitlement •Certainty in storage operations	In either case: •Flood control changes from coordinated to "called upon" •U.S. requests for storage limited to floods that cannot be adequately controlled by all related U.S. storage •U.S. must pay for operating costs and any economic losses due to called upon
Treaty Terminated	•B.C. will operate 3 dams for benefit of Canada, except for called upon flood control •Canadian Entitlement will cease	

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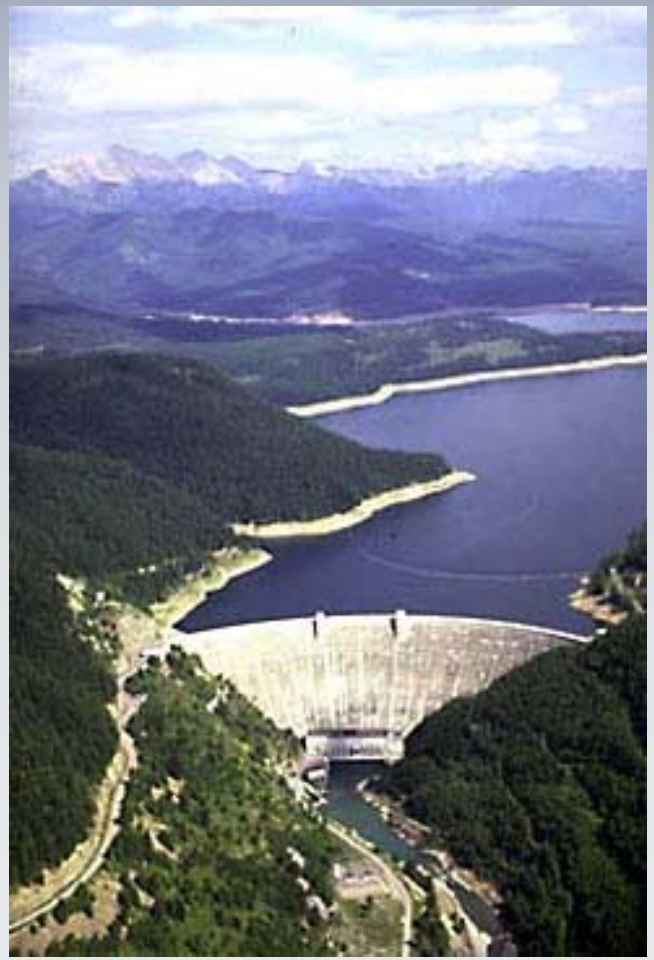
Possible Impacts to MT

- MT reservoirs account for ~42% of authorized U.S. system flood control
- Flood Control Post 2024: Effective Use and Called Upon
  - Impacts recreation, ecological health
  - EU expected in 18-23 out of 70 years studied
  - CU used 4-6 times in 70 years; costs U.S. $4-34 million per request
- Hydropower: Treaty termination eliminates Entitlement payments
  - Annual cost of $229-335 million



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Montana Considerations

- Preserve operations to protect local flood control
- Preserve operations to maintain ecosystem health
- Protect Montana interests so far maintained through Bi-Op litigation
- Explore how other objectives (e.g. irrigation, recreation) could be impacted in Treaty alternatives
- Support and participate in forums to improve regional Basin management

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Columbia River Symposium

October 10-12, 2012
KwaTaqNuk Resort – Polson, MT

UBC
The University of Montana
Oregon State University OSU
University of Calgary
Washington State University
University of Idaho
University of Washington

http://www.columbiarivergovernance.org/

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Questions?

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Total Columbia Basin Storage

Project Groups	Active Storage (Maf)	Authorized		Not Authorized Incidental Storage (Maf)	Total Storage (Maf)
		System Flood Control (Maf)	Local Flood Storage (Maf)		
Projects Authorized and Currently Operated for System Flood Control	19.738	18.282	---	0.000	18.282
Projects Authorized for Conditional System Flood Control	1.275	0.745	---	---	0.745
Projects Authorized and Operated for Local Flood Control	2.149	---	2.149	0.000	2.149
Projects Not Authorized for Local Flood Control but at times may provide incidental system flood protection	2.938	---	0.231	1.960	2.191
Irrigation Projects Not Authorized for Local Flood Control with No Flood Control Operations	1.766	---	---	---	0.000
Projects with Minimal or No Storage Capacity(not effective at reducing flow at the Dalles)	0.875	---	---	---	0.000
Run of River Projects with Minimal or No Storage Capacity	0.607	---	---	0.345	0.345
TOTAL U.S. STORAGE	29.348	19.027	2.380	2.305	23.712
Canadian Storage Projects	20.500	15.500			20.500
TOTAL COLUMBIA BASIN STORAGE	**49.848**	**34.527**	**2.380**	**2.305**	**44.212**

* Per Article II of the Treaty

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Iteration #1

Operating Criteria	CC	TC 450	TT 450	TC 600	TT 600
Treaty Status					
Treaty Continues	✓	✓		✓	
Treaty Terminates			✓		✓
Flood Control Operations					
FCOP with 8.95 MAF	✓				
Called Upon with Current SRDs		✓	✓		
Called Upon with Modified SRDs				✓	✓
Power Operations					
Coordinated Treaty Planning	✓	✓		✓	
Uncoordinated Canadian Operation			✓		✓
Ecosystem Function Operations					
1 MAF Supplemental Agreement for flow augmentation	✓	✓		✓	
BiOp Operations	✓	✓	✓	✓	✓

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Iteration #2 Scenarios

- Reference Cases:
  - Current operating conditions
  - 450 TC & TT – current SRDs
  - 600 TC & TT – relaxed SRDs
- Ecosystem Based Function:
  - E1 – normative hydrograph
  - E2 – normative reservoir levels and river flows
  - E3 – improve summer anadromous fish migration
  - E4 – reconnect historic floodplains
  - E5 – dry year strategy
- Flood Control:
  - F1 – full use of authorized storage
  - F2 – no called upon
  - F3 – modify U.S. levees
- Hydropower:
  - H1 – optimize joint hydropower system
  - H2 – optimize joint hydropower system & current biological operating requirements

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