

Lake Chelan Operations Update

March 4, 2019

Agenda

- Seven Operating Objectives & Target Elevations
- Operations During Dry Water Years
- Current Water Year
- When Water Supply Becomes an Issue for Refill

7 Operating Objectives

Per Chapter 8 of the Comprehensive Settlement Agreement

1. Maintain minimum flows in the Chelan River (this objective has priority over lake levels)
2. Reduce high flows in the Chelan River (this objective has priority over lake levels)
3. Satisfy regulatory requirements for flood control (adjusting lake level)
4. Provide usable lake levels for recreation (which varies between 1,090 and 1,098 ft. depending on the slope of the shoreline and dock configuration)
5. Reduce shoreline erosion
6. Prevent fish passage blockages (due to tributary barriers)
7. Minimize effect of refill on attainment of flow objectives for salmon in Columbia River

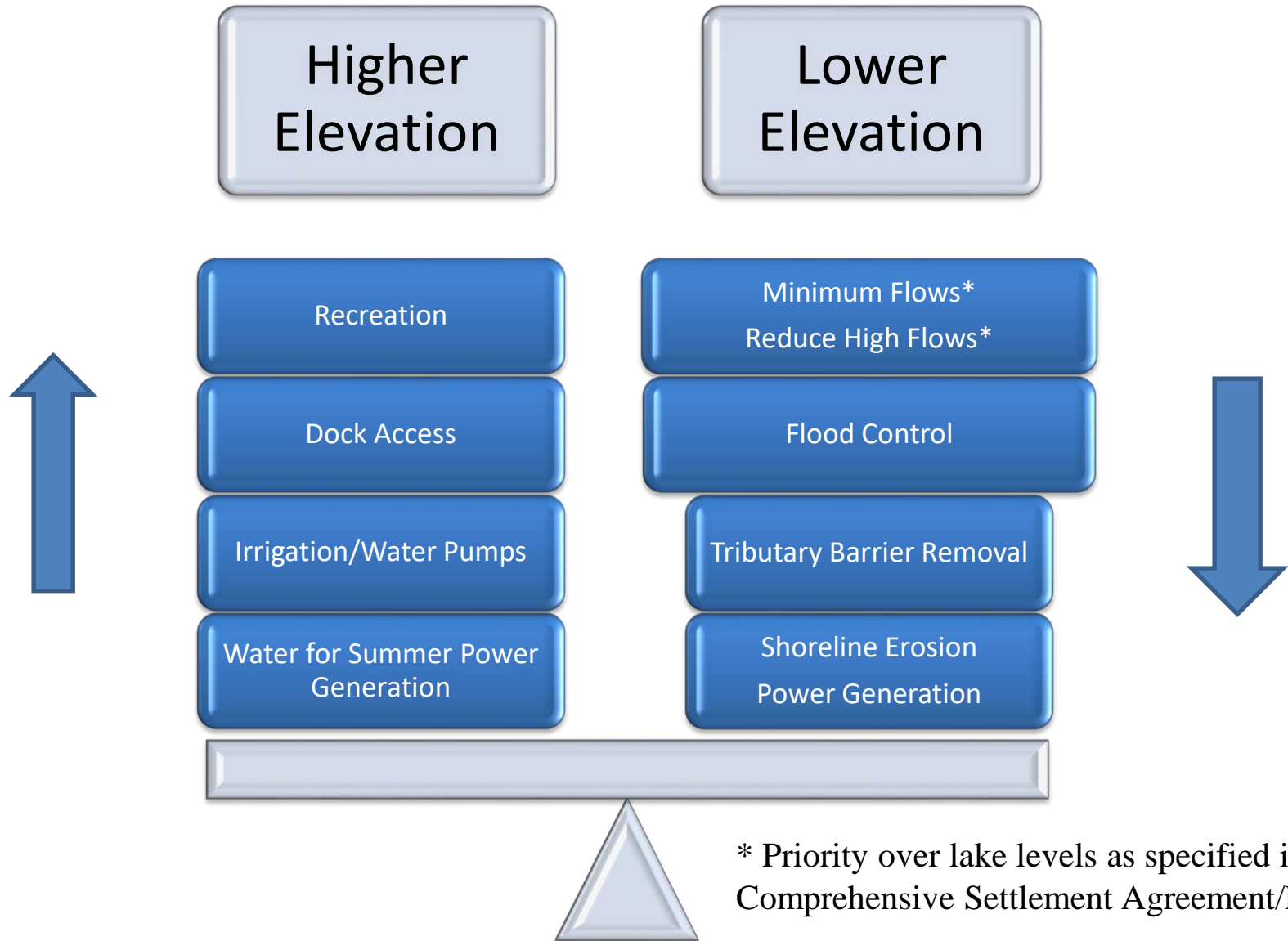


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Managing Lake Levels

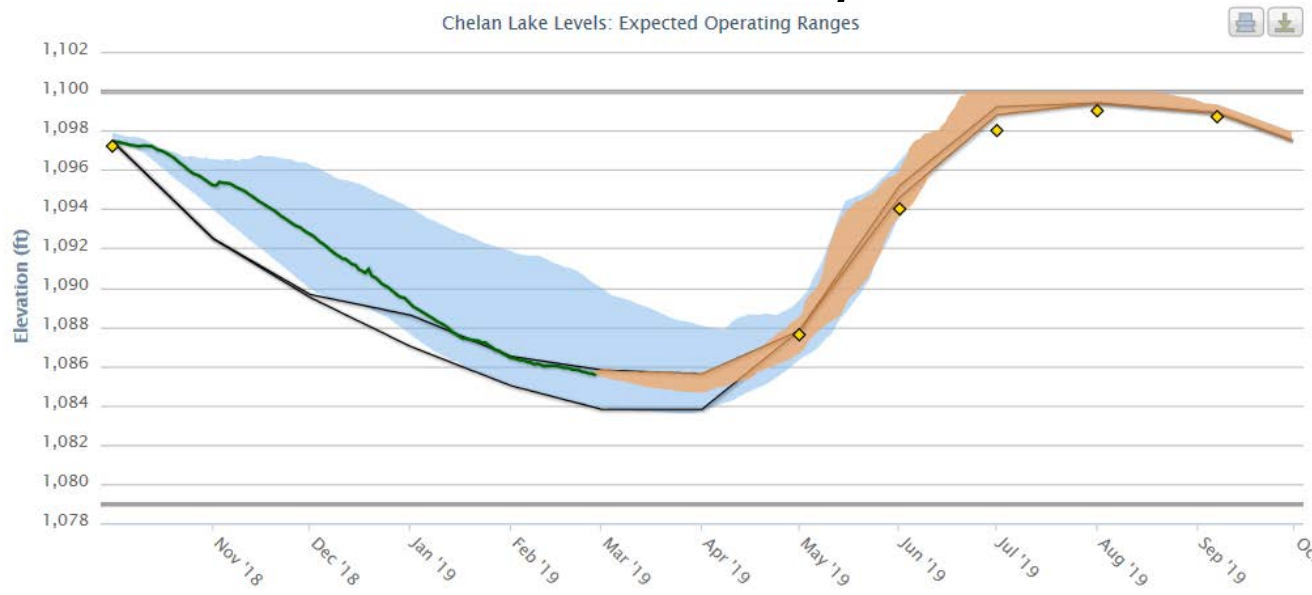
A balance between many competing objectives



* Priority over lake levels as specified in the Comprehensive Settlement Agreement/License

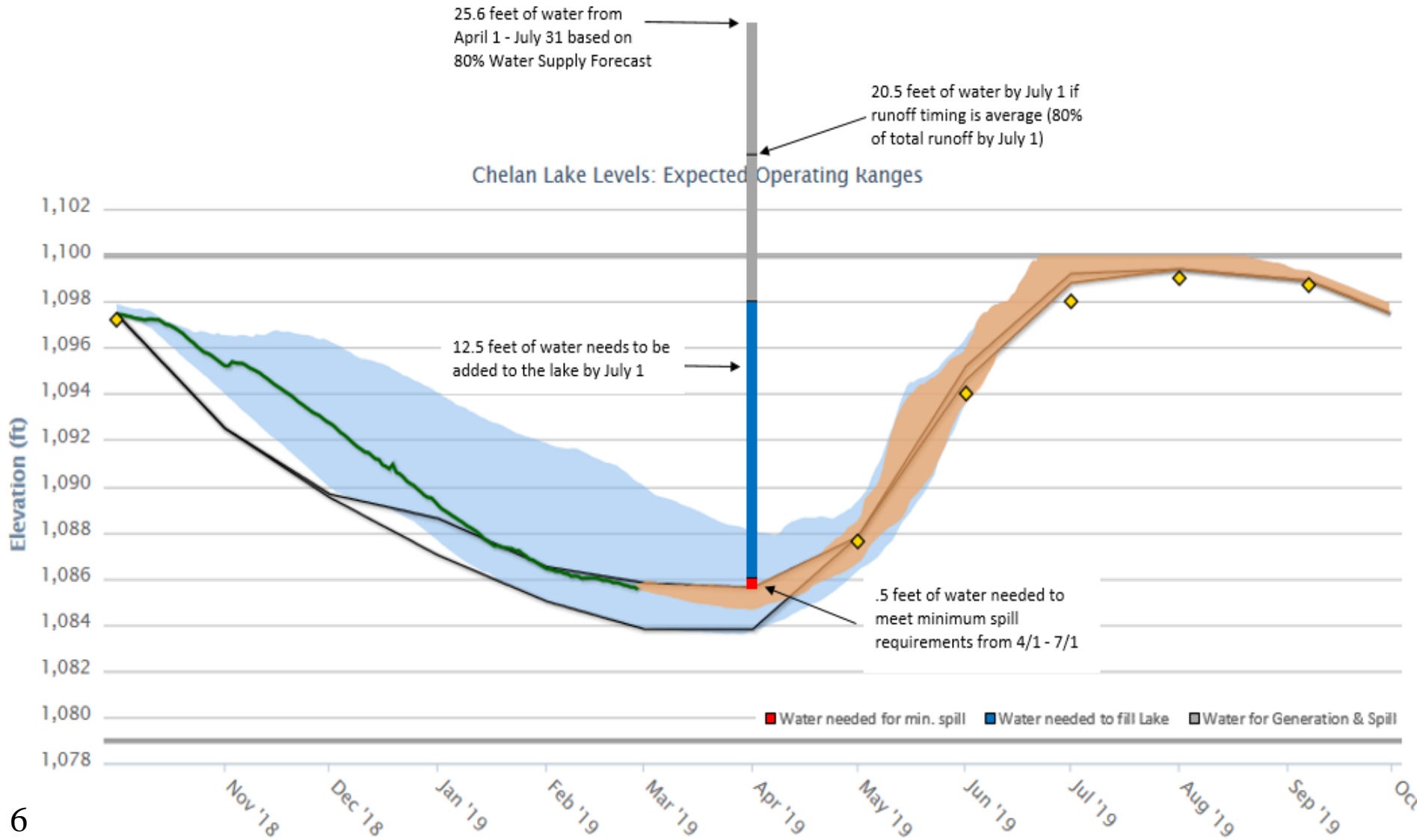
Operations During Dry Water Years

- Follow the target curve built for dry and average water years.
- Reduce the number of water years used in modeling to reflect current conditions (orange band in graph below).
- Less water is available for generation, but the amount of water used to refill the lake stays constant.



Current Water Year

Feb. 1 forecast was for 80% of average water year



When Does Water Supply Become an Issue for Refill?

- If 60% of average water year:
 - 19.2 feet of water from 4/1 – 7/31
 - Average runoff timing = 15.4 feet of water by 7/1
 - Late runoff timing = 14.4 feet of water by 7/1
- If 55% of average water year:
 - 17.6 feet of water from 4/1 – 7/31
 - Average runoff timing = 14.1 feet of water by 7/1
 - Late runoff timing = 13.2 feet of water by 7/1
- If 50% of average water year:
 - 16.0 feet of water from 4/1 – 7/31
 - Average runoff timing = 12.8 feet of water by 7/1

*Only 3 of 89 historical water years have been less than 60% of average – 2005 (53%), 2001 (55%), 1977 (47%)

Key Points:

- Despite recent snow in the valley, snowpack remains below average in the Lake Chelan Basin (~ 80%).
- An 80% of average water year is within our normal operating regime.
- Although generation may be reduced, we do not expect to have a problem refilling Lake Chelan by July 1 this year.
- We will keep the board posted if conditions change.

Questions?