

# Snake River fall Chinook summarized fitness outcomes

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Snake River fall Chinook Columbia River temperature time series from 2017. 4 scenarios included:

- Columbia River 2017
- Columbia River 2017, no CWRs
- Columbia River 2017 plus 1
- Columbia River 2017 plus 1, no CWRs

Columbia 2017B assigns the John Day Pool temperature from the John Day forebay, which is the warmer section of the pool.

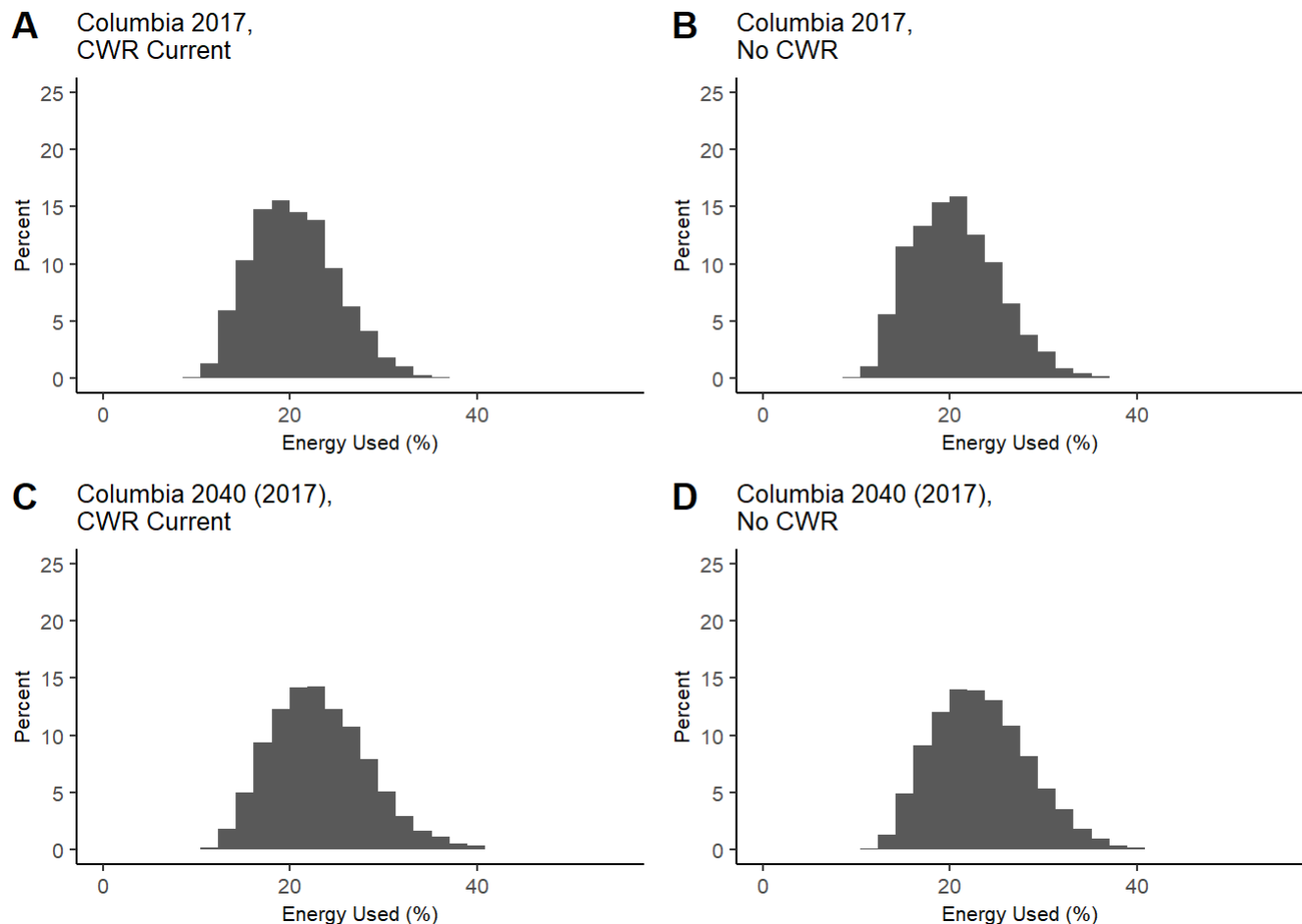


Fig. 1. Histogram of percent energy lost for modeled Snake River fall Chinook migrating through four different modeled thermalscapes.

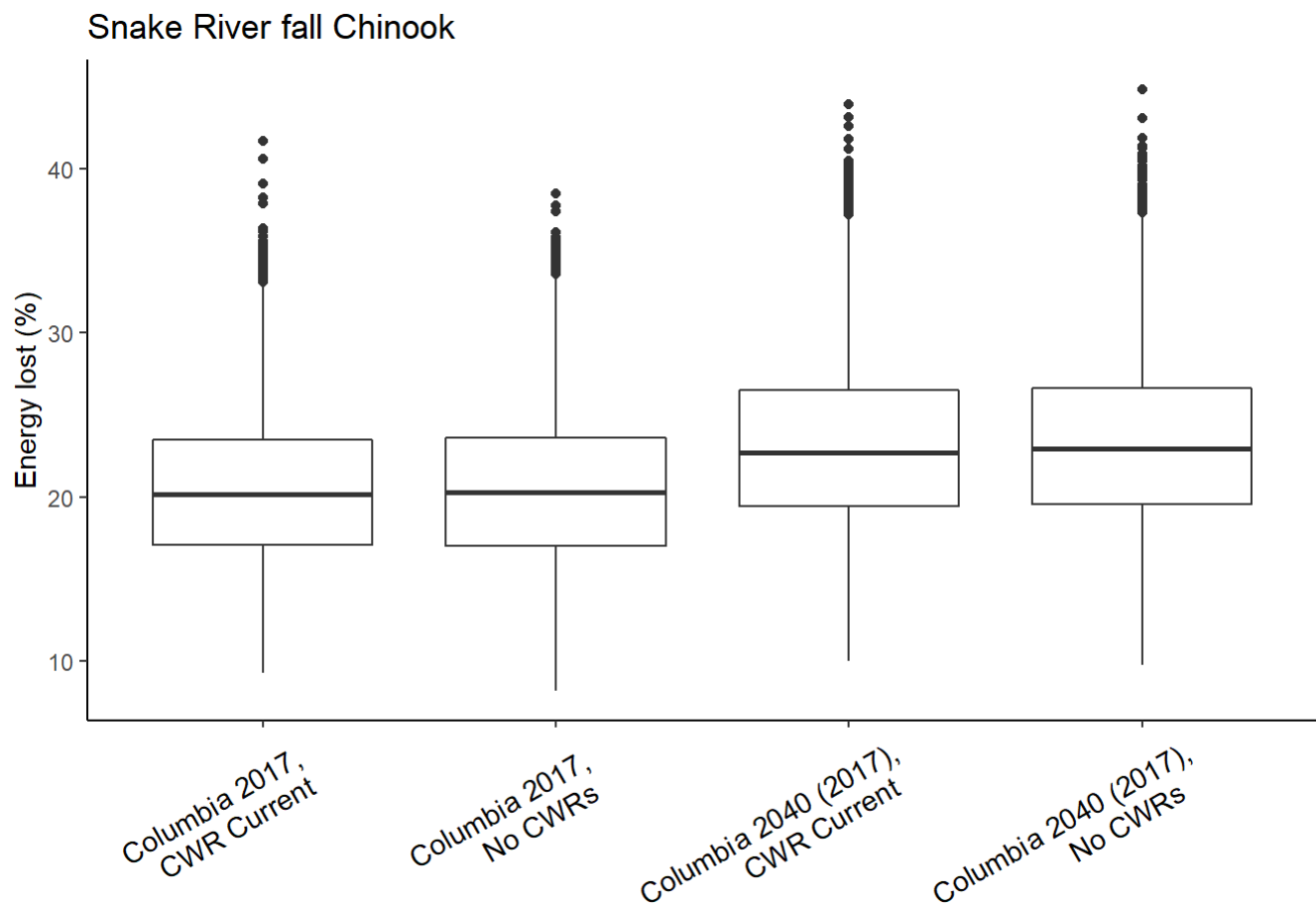


Fig. 2. Boxplot of percent energy lost for modeled Snake River fall Chinook migrating through four different modeled thermalscapes.

Table 1. Percent energy used across different HexSim thermalscapes summarized for Snake River fall Chinook.

Scenario	Minimum	25% quantile	Median	75% quantile	Maximum
Columbia 2017, CWR Current	9.3	17.1	20.2	23.5	41.7
Columbia 2017, No CWR	8.2	17.1	20.3	23.6	38.5
Columbia 2017, CWR Current	10.0	19.4	22.7	26.5	43.9
Columbia 2017, No CWR	9.8	19.5	22.9	26.7	44.8

Table 3. Model output for total hours residing n cold water refuges summarized for Snake River fall Chinook.

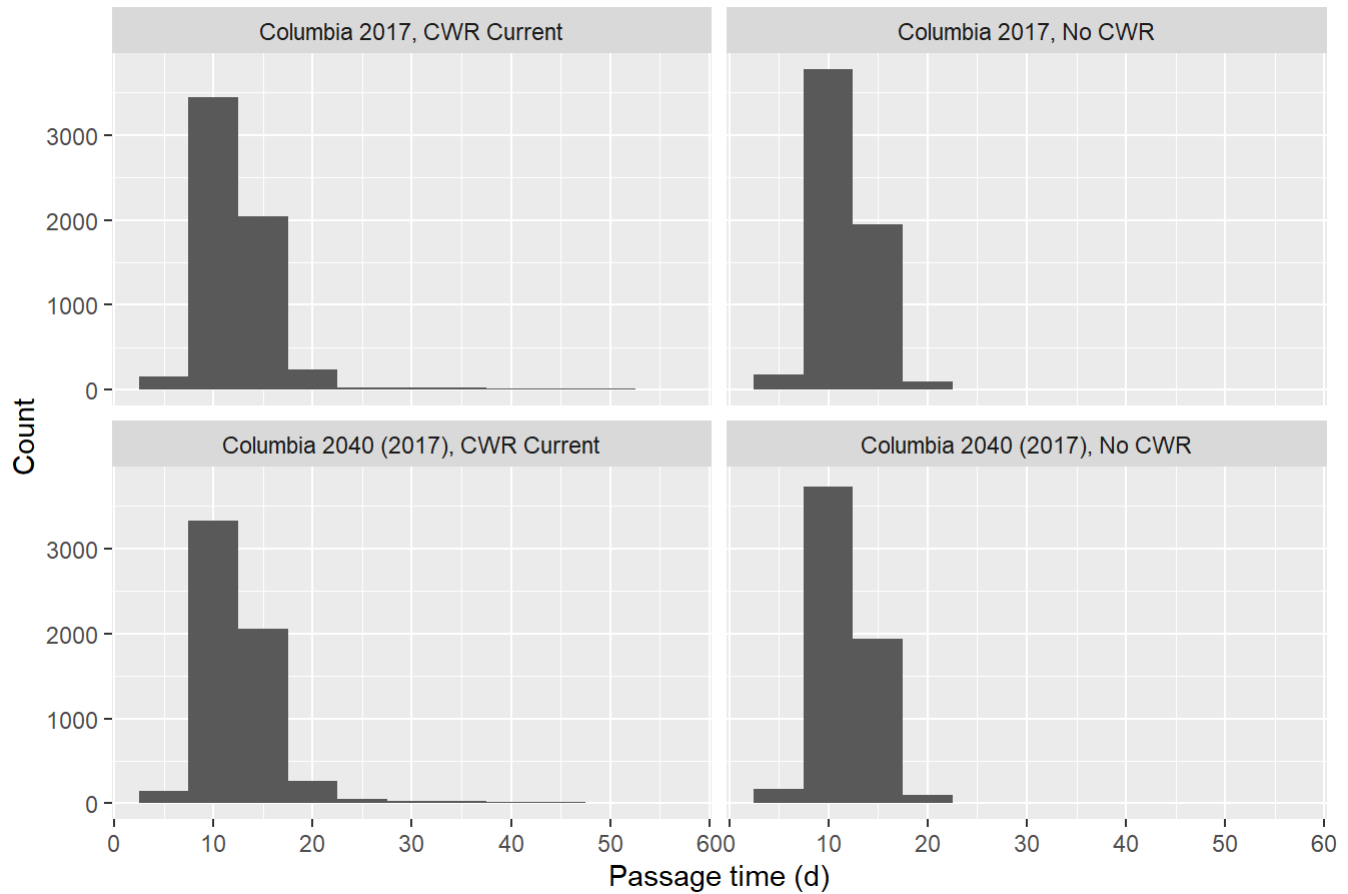
Scenario	Total CWR Residence (h)
Columbia 2017,CWR Current	125134
Columbia 2017, No CWRs	2
Columbia 2040 (2017), Current	151218
Columbia 2040 (2017), No CWRs	4

Table 4. Model output for percent of individuals dying from acute temperature stress summarized for Snake River

fall Chinook.

Scenario	Total mortality
Columbia 2017,CWR Current	0.45
Columbia 2017, No CWRs	0.15
Columbia 2040 (2017), Current	2.95
Columbia 2040 (2017), No CWRs	3.05

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